Demora diagnóstica en la mujer con síndrome coronario agudo

ENFERMEDAD CARDIOVASCULAR EN LA MUJER

VI Jornadas CEIPC, Madrid 2015

Domingo Marzal Martín

SOCIEDAD ESPAÑOLA DE CARDIOLOGÍA

Servicio de Cardiología

SES

Complejo Hospitalario de Mérida

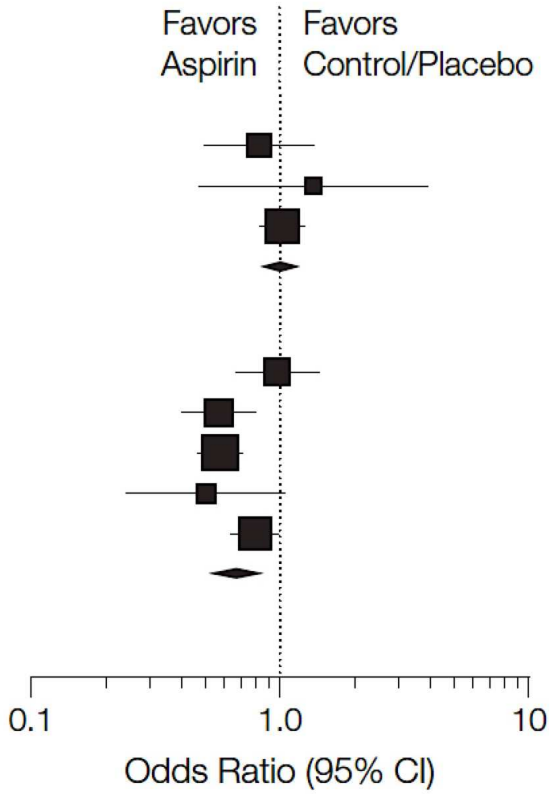
mujer ≠ hombre

Aspirin for the Primary Prevention of Cardiovascular Events in Women and Men

A Sex-Specific Meta-analysis of Randomized Controlled Trials

MYOCARDIAL INFARCTION

Study, y	Events, No./Total: Aspirin	Events, No./Total: Control/Placebo	Odds Ratio (95% CI)
Women			
HOT,[12] 1998	29/4437	35/4446	0.83 (0.51-1.36)
PPP,[17] 2001	8/1277	6/1306	1.37 (0.47-3.95)
WHS,[9] 2005	198/19 934	193/19 942	1.03 (0.84-1.25)
Total	235/25 648	234/25 694	1.01 (0.84-1.21)
Men			
BDT,[15] 1988	80/3429	41/1710	0.97 (0.66-1.42)
HOT,[12] 1998	54/4962	93/4945	0.57 (0.41-0.81)
PHS,[14] 1989	139/11 037	239/11 034	0.58 (0.47-0.71)
PPP,[17] 2001	11/949	22/963	0.50 (0.24-1.04)
TPT,[16] 1998	154/2545	190/2540	0.80 (0.64-0.99)
Total	438/22 922	585/21 192	0.68 (0.54-0.86)



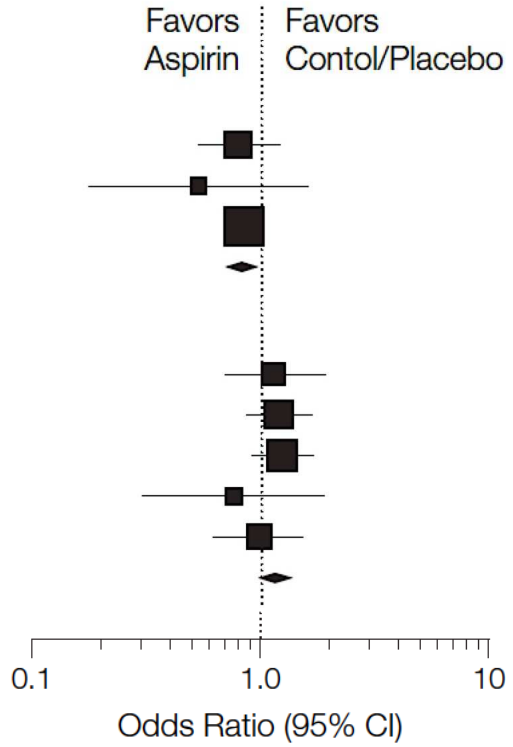
Berger JS, et al. JAMA. 2006;295:306-13

Aspirin for the Primary Prevention of Cardiovascular Events in Women and Men

A Sex-Specific Meta-analysis of Randomized Controlled Trials

STROKE

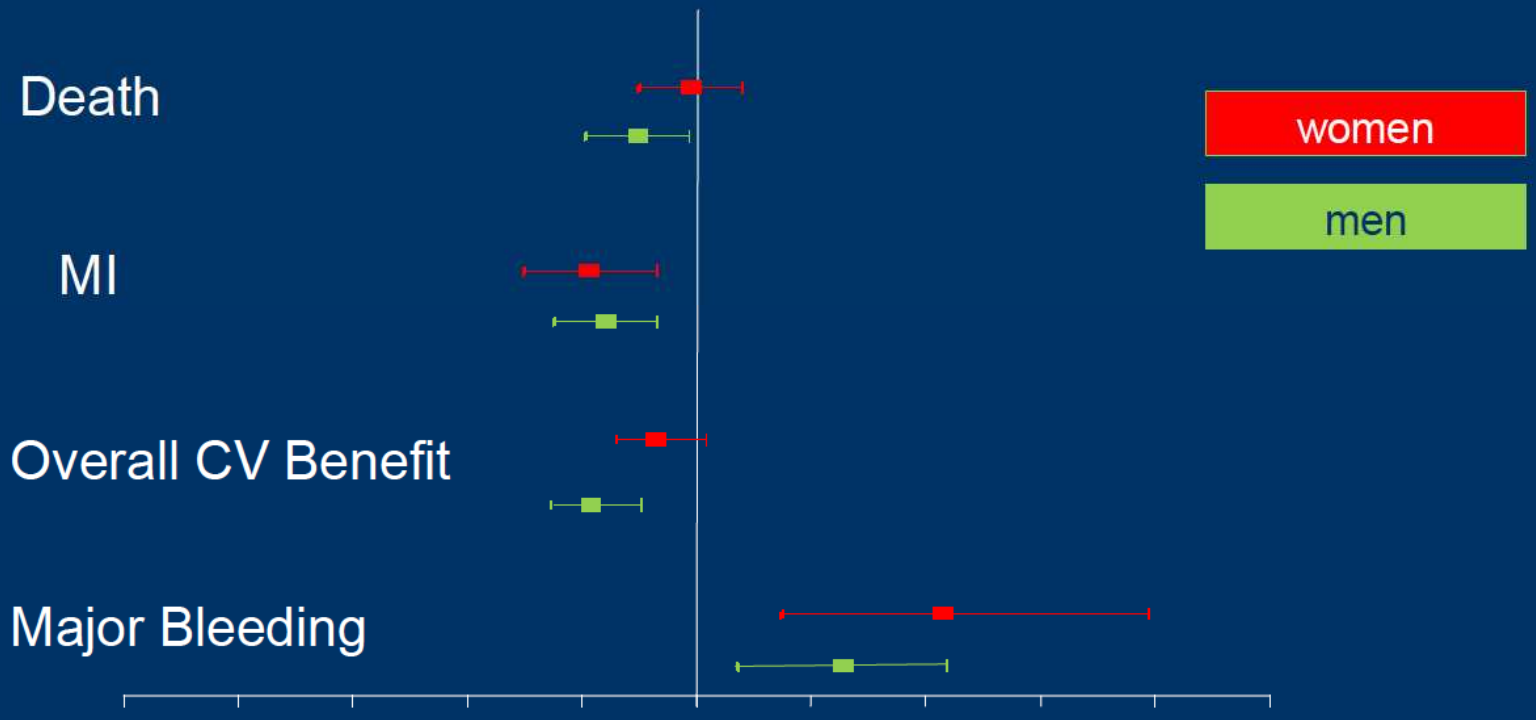
Study, y	Events, No./Total: Aspirin	Events, No./Total: Control/ Placebo	Odds Ratio (95% CI)
Women			
HOT,[12] 1998	54/4437	67/4446	0.81 (0.56-1.16)
PPP,[17] 2001	6/1277	11/1306	0.56 (0.21-1.51)
WHS,[9] 2005	221/19 934	266/19 942	0.84 (0.70-1.01)
Total	281/25 648	344/25 694	0.83 (0.70-0.97)
Men			
BDT,[15] 1988	61/3429	27/1710	1.13 (0.72-1.78)
HOT,[12] 1998	94/4962	80/4945	1.17 (0.87-1.57)
PHS,[14] 1989	119/11 037	95/11 034	1.22 (0.93-1.59)
PPP,[17] 2001	10/949	13/963	0.78 (0.34-1.78)
TPT,[16] 1998	47/2545	48/2540	0.98 (0.65-1.47)
Total	331/22 922	266/21 192	1.13 (0.96-1.33)



Berger JS, et al. JAMA. 2006;295:306-13

Sex-Specific Efficacy/Safety of Clopidogrel

Meta-analysis of CURE, COMMIT, CREDO, CHARISMA, CLARITY Studies

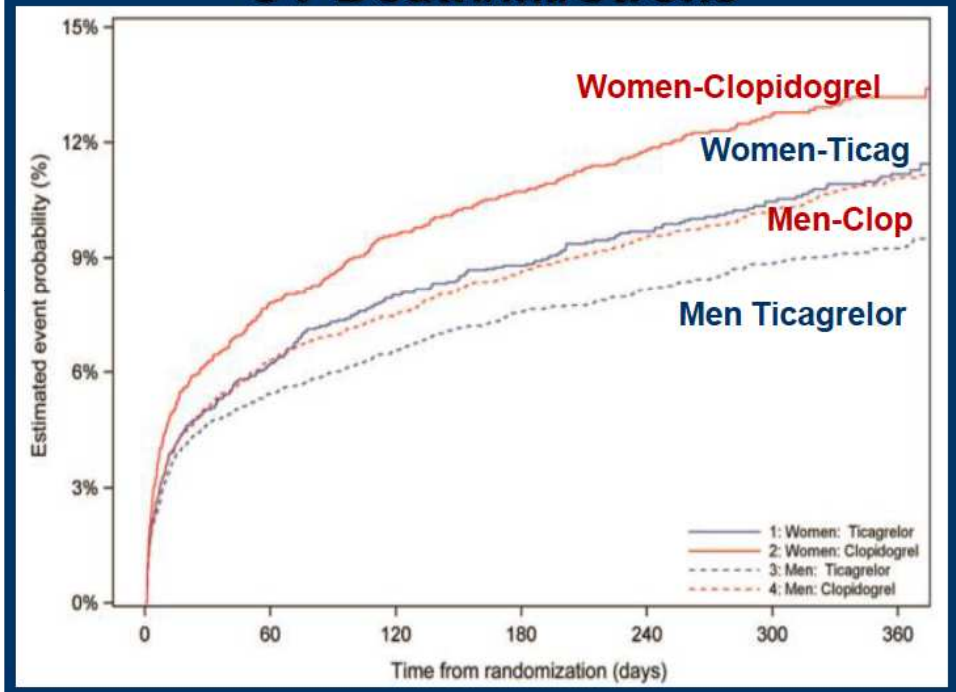


Duke Clinical Research Institute

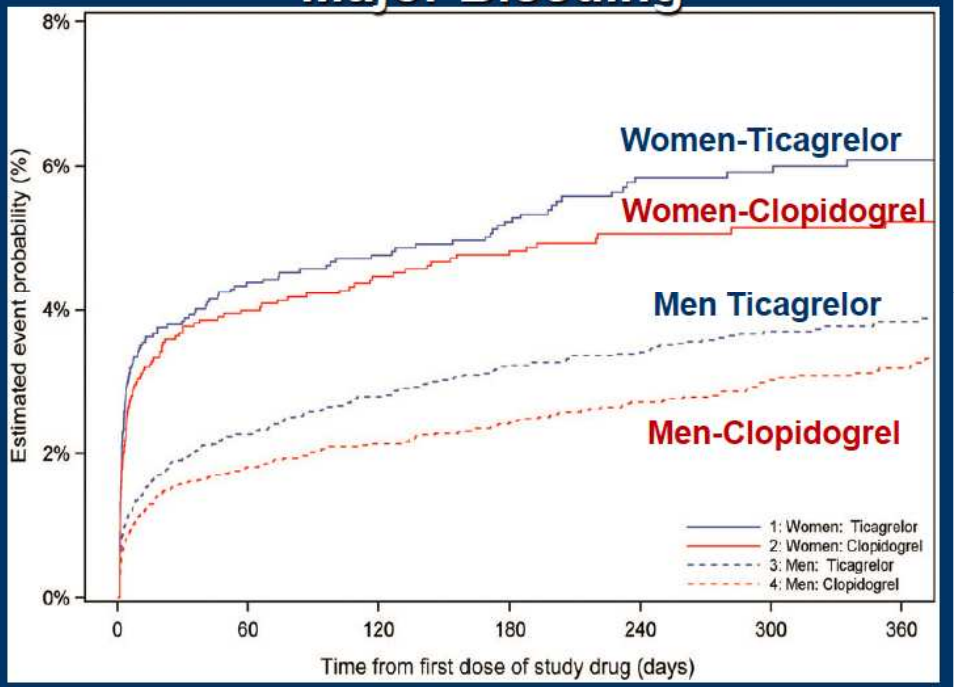
Berger. JACC. 2009;54:1935.

Sex-Specific Efficacy/Safety of Ticagrelor

CV Death/MI/Stroke



Major Bleeding



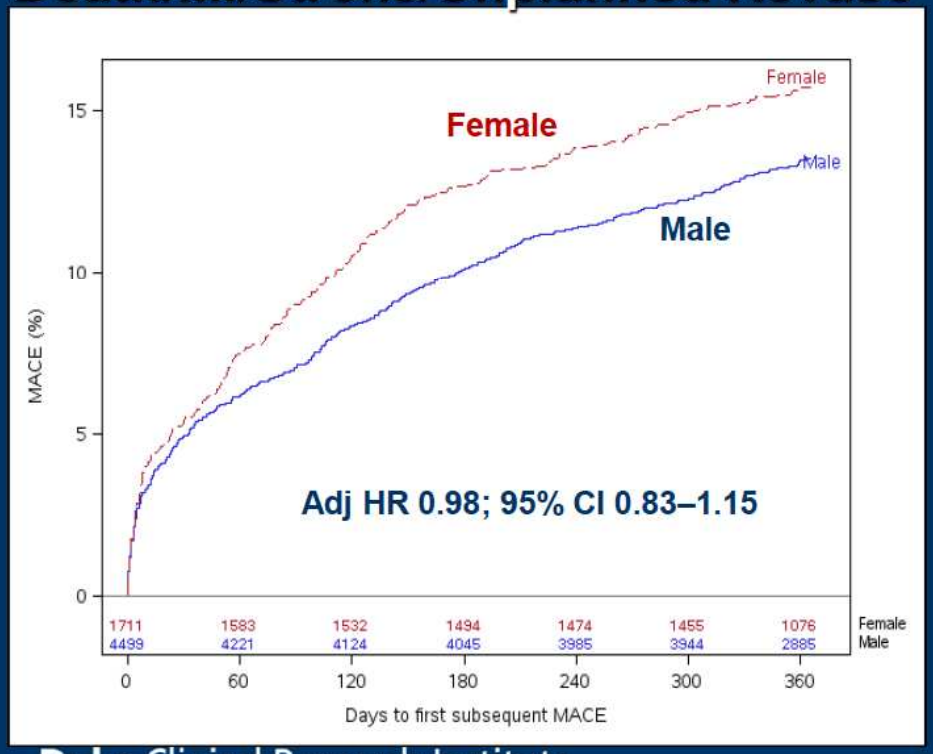
Duke Clinical Research Institute

Husted *et. al. EHJ* 2014; 35: 1541

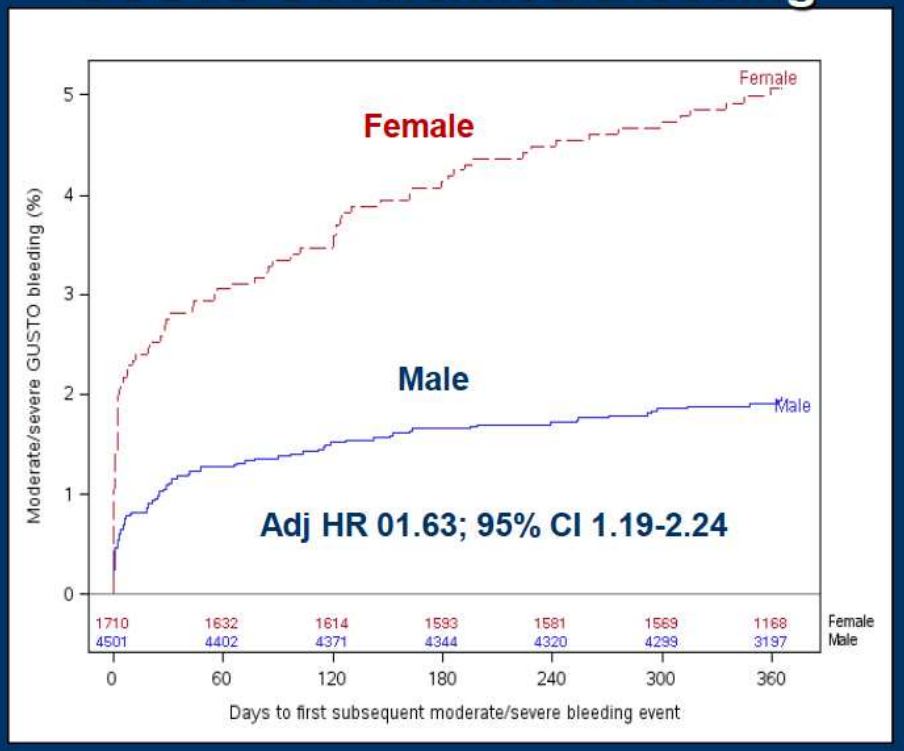
TRANSLATE-ACS

Sex-based Differences in Outcomes

Death/MI/Stroke/Unplanned Revasc



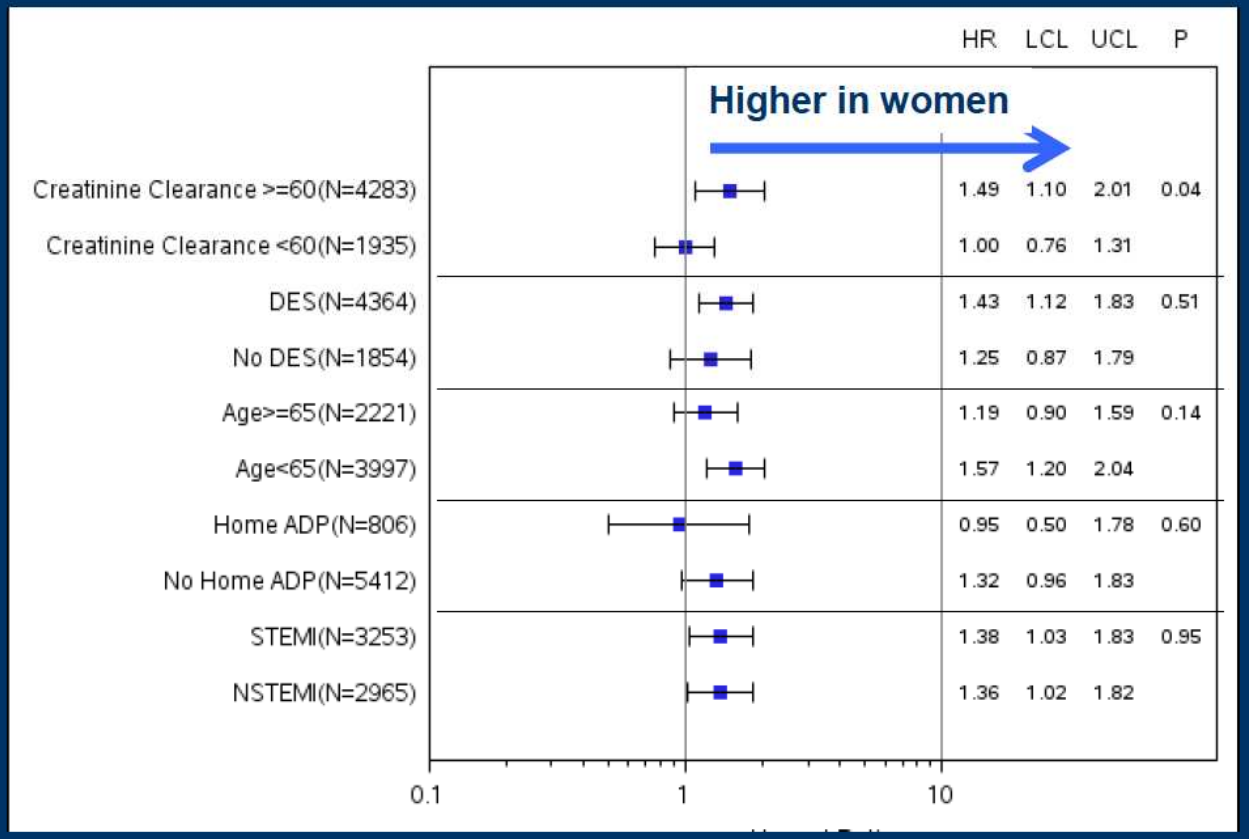
GUSTO Severe/Mod Bleeding



Duke Clinical Research Institute

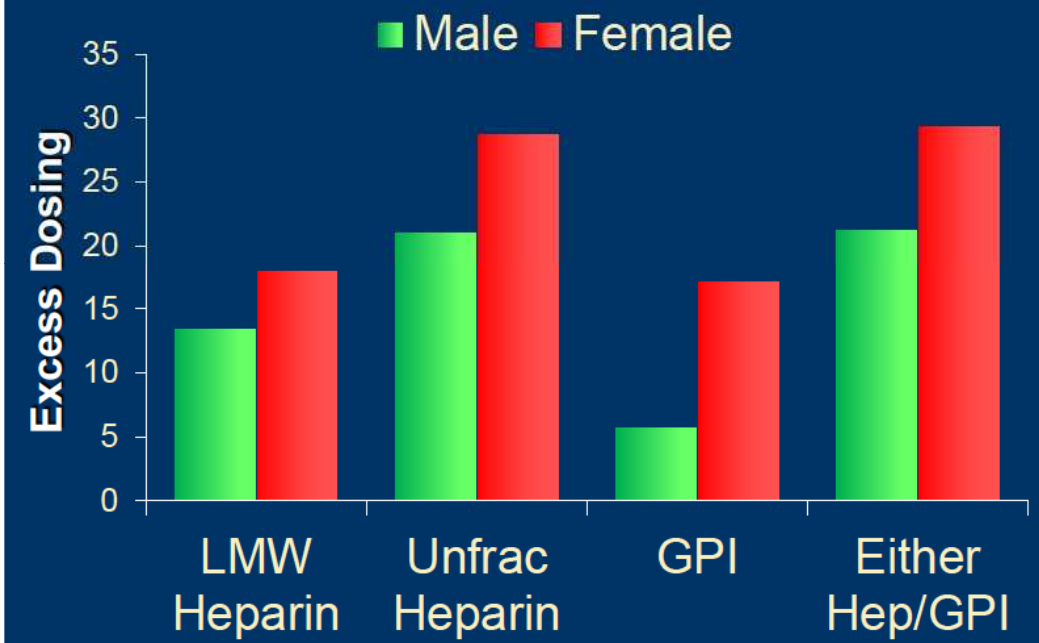
Hess, *JAHA* 2014; 3(1): e000523

Bleeding Subgroups



Hess, *JAHA* 2014; 3(1): e000523

Excess Dosing and Bleeding



Adjusted Risk of Excess Dosing:
OR 4.11, 95% CI 3.78 – 4.48

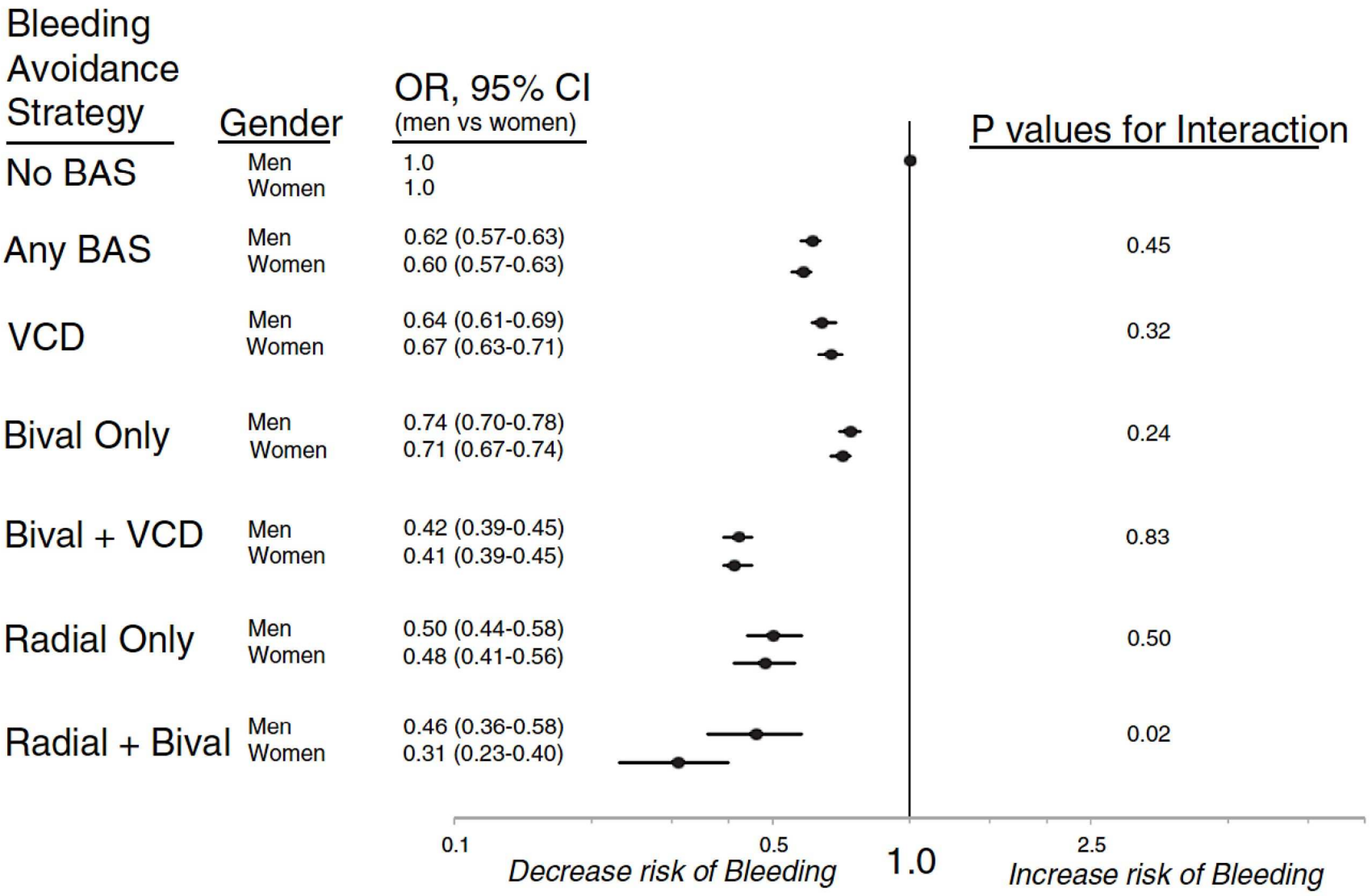
Among Women:
excess dosing associated with 72% increased bleeding

Among Men:
excess dosing associated with 27% increased bleeding

Duke Clinical Research Institute

Alexander. Circulation 2006; 114:1380

Bleeding Avoidance Strategies



Daughert SL, et al. J Am Coll Cardiol. 2013;61:2070-8


CRUSADE
Bleeding Score
Calculator

	SPIRIT Women Women (n=1,573)	SPIRIT V Men (n=2,072)	*p*-value
Age (year)	67±11	62±11	<.0001
Age categories (%)			
18-65 years	39	60	–
≥65 years	61	40	–
Waist circumference (cm)	95±14	99±11	0.001
Central obesity (%)	71	39	<0.0001
Body mass index (kg/m²)	28±5	28±4	0.098
Body mass index >30 kg/m² (%)	27	24	0.155
Smokers (%)	14	26	<0.0001
Hypertension (%) requiring medication	78	62	<0.0001
Hypercholesterolaemia (%) requiring medication	64	58	0.002
Diabetes (%)	34	28	<0.0001

Morice MC, et al. EuroIntervention 2012;8:325-35

	SPIRIT Women Women (n=1,573)	SPIRIT V Men (n=2,072)	*p*-value
Post-menopausal status (%)	94	NA	–
All prior cardiac interventions (%)	17	26	<0.0001
All prior cardiac intervention on target vessel (%)	2	10	<0.0001
Prior MI (%)	26	33	<0.0001
MI within 2 months (%)	45	14	0.035
Family history of coronary artery disease (%)	36	34	0.281
Silent ischaemia (%)	10	5	0.0001
Stable angina CCS class III or IV (%)	15	11	0.0007
Unstable angina Braunwald class III (%)	16	11	0.0001
Left ventricular dysfunction	13	NA	–
Multivessel disease (%)	36	42	<0.0001

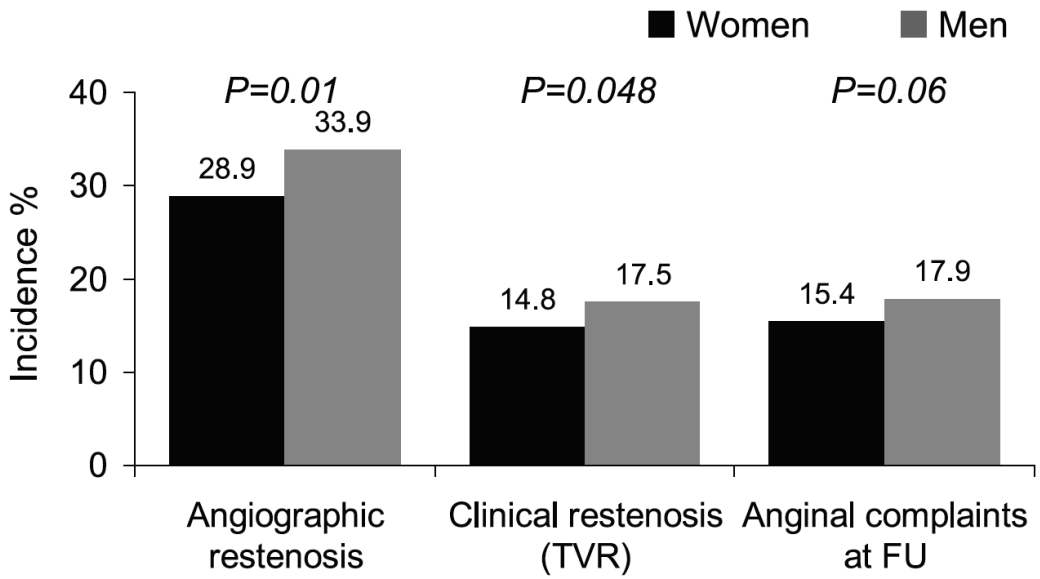
Morice MC, et al. EuroIntervention 2012;8:325-35

Prevalence of "Normal" and Nonobstructive Coronary Arteries in Women Compared With Men

	No./Total (%)		
	Women	Men	*P* Value
Acute coronary syndrome			
GUSTO[2]	343/1768 (19.4)	394/4638 (8.4)	<.001
TIMI 18[3]	95/555 (17)	99/1091 (9)	<.001
Unstable angina[2]	252/826 (30.5)	220/1580 (13.9)	<.001
TIMI IIIa[6]	30/113 (26.5)	27/278 (8.3)	<.001
MI without ST-segment elevation[2]	41/450 (9.1)	55/1299 (4.2)	.001
MI with ST-segment elevation[2]	50/492 (10.2)	119/1759 (6.8)	.02

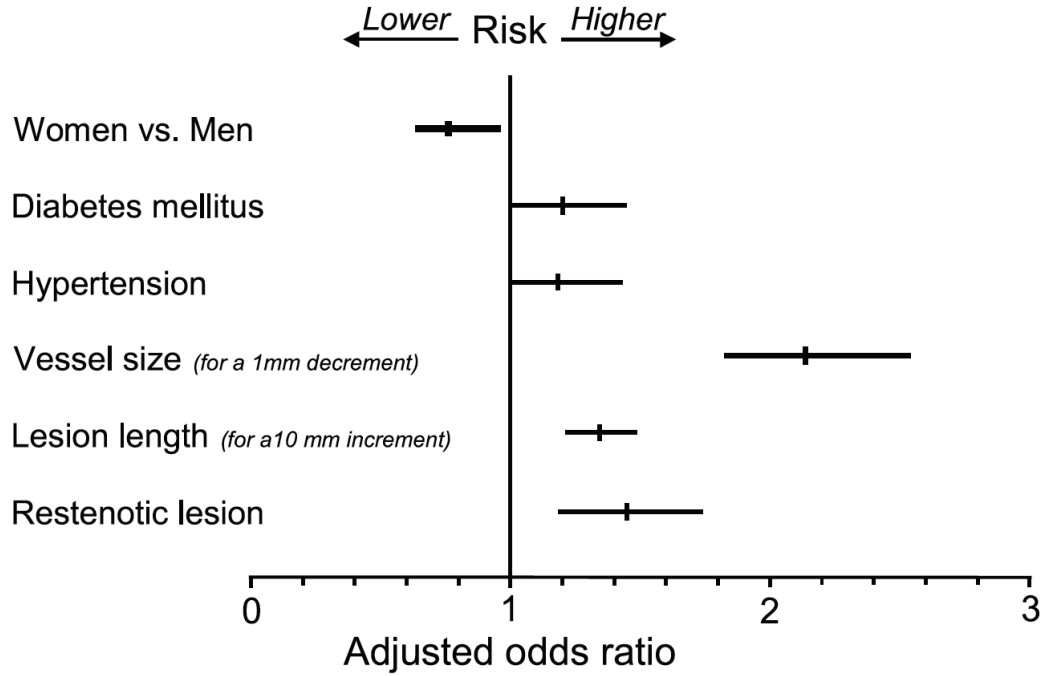
Abbreviations: GUSTO, Global Utilization of Streptokinase and t-PA for Occluded Coronary Arteries; MI, myocardial infarction; TIMI, Thrombosis In Myocardial Infarction.

Bugiardini R, et al. JAMA 2005;293:477-84



Incidence at 6 months - 1 year

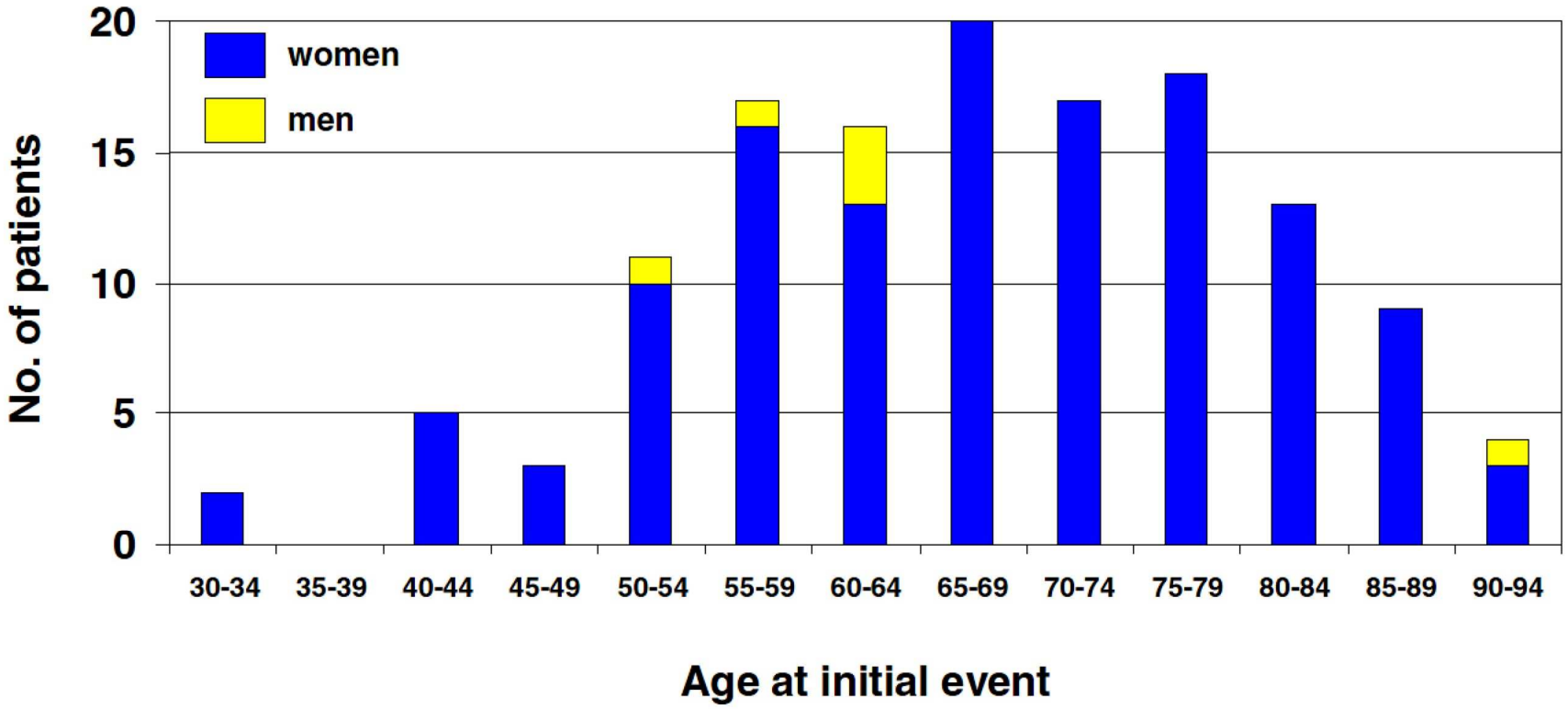
Independent predictors of angiographic reestenosis



Mehilli J, et al. Eur Heart J 2003;24:1523-30

stress cardiomyopathy occurs in women

136 consecutive cases of Takotsubo cardiomyopathy

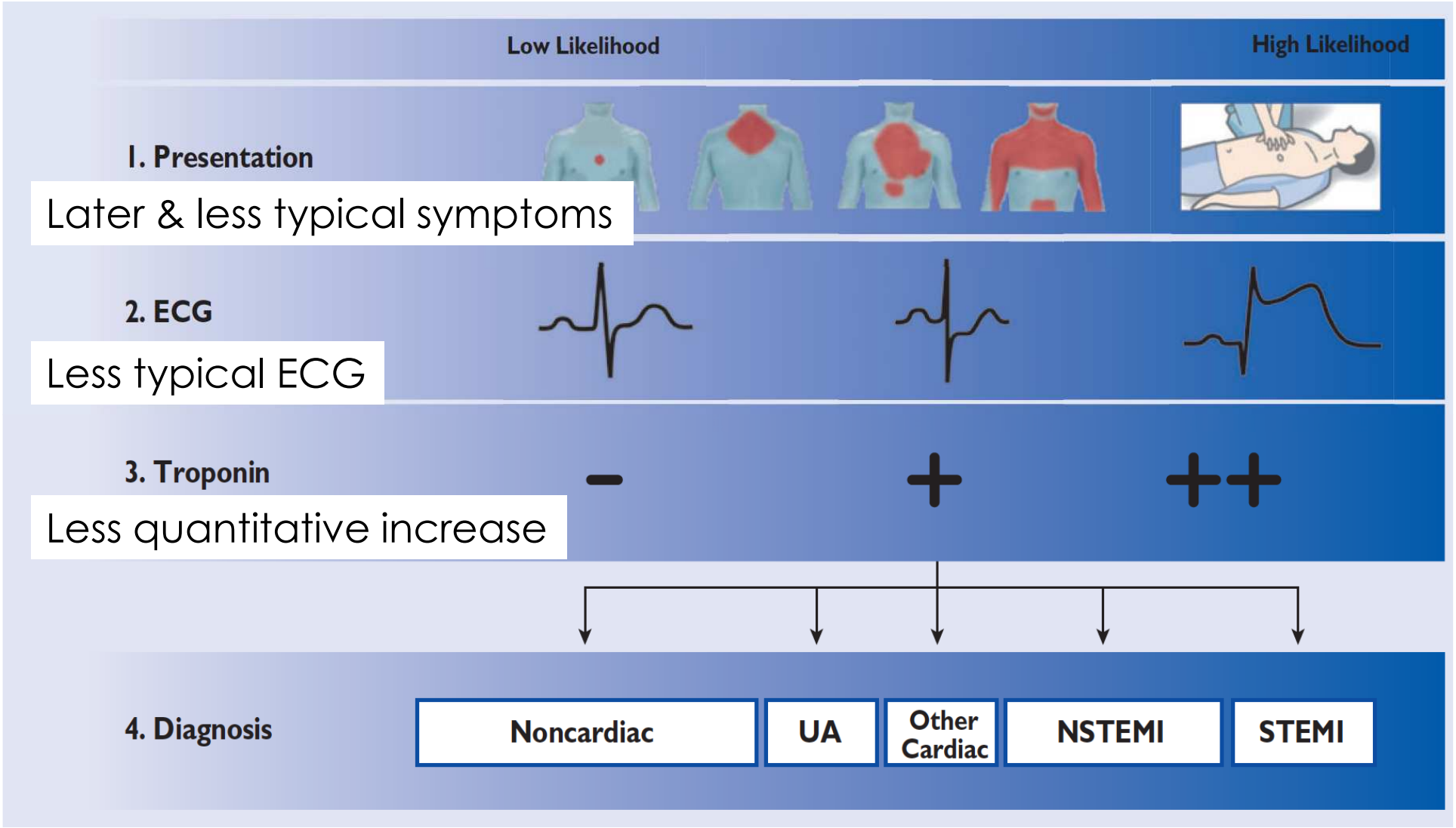


Sharkey SW, et al. JACC 2010;55:333-41

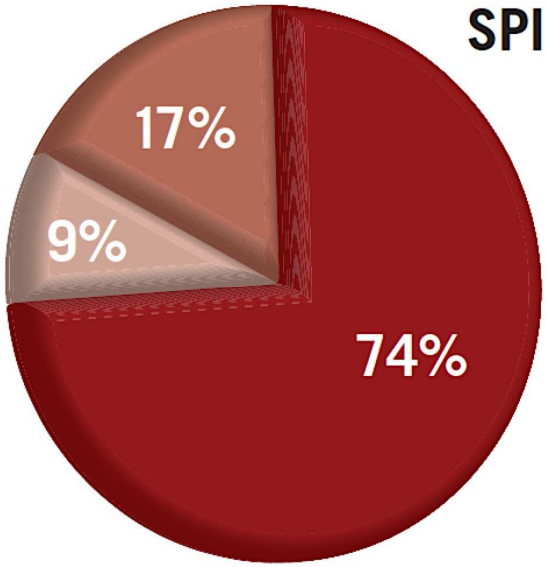
síntomas

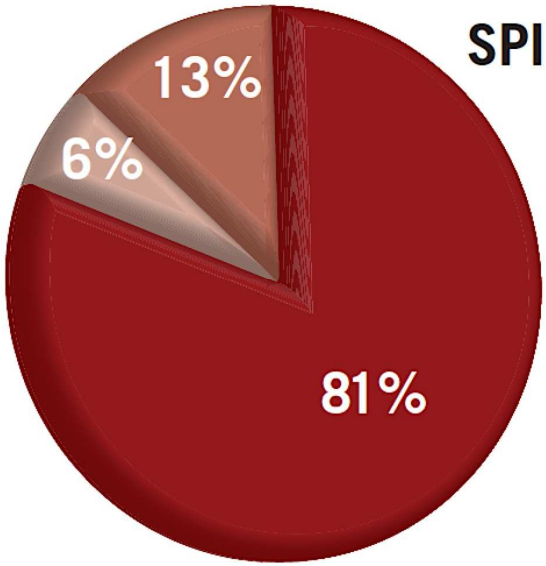
mujer ≠ hombre

initial assessment - women vs men



Roffi M, et al. Eur Heart J doi:10.1093/eurheartj/ehv320



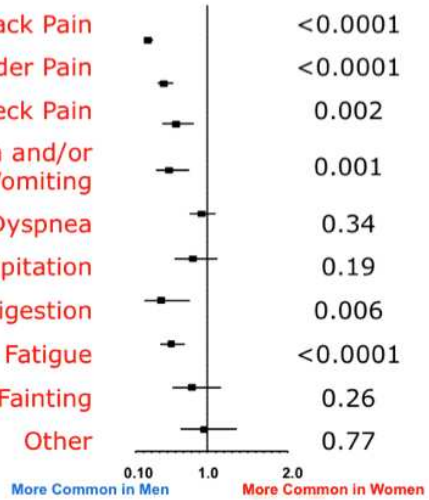


Typical angina

Atypical chest pain

No chest pain

SPIRIT V Men (%)	SPIRIT Women (%)	Symptom	Relative Risk (95% CI)	P-Value
26.9	6.6	Midback Pain		<0.0001
20.2	9.2	Arm/Shoulder Pain		<0.0001
8.8	5.2	Throat/Neck Pain		0.002
6.7	3.4	Nausea and/or Vomiting		0.001
22.4	20.5	Dyspnea		0.34
7.6	6.1	Palpitation		0.19
2.8	1.1	Indigestion		0.006
12.2	6.6	Fatigue		<0.0001
6.1	4.9	Dizziness/Fainting		0.26
6.1	5.8	Other		0.77



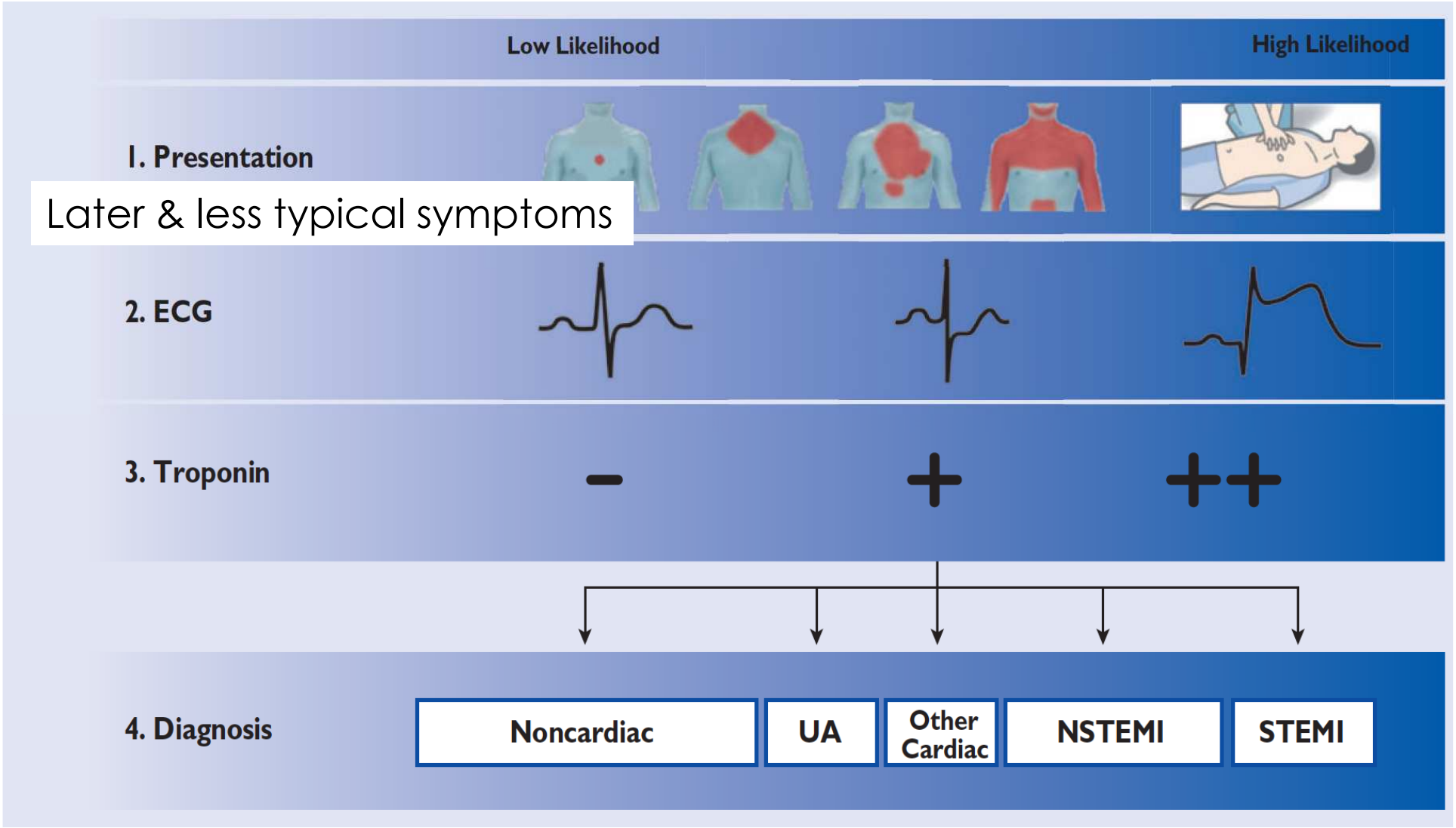
Morice MC, et al. EuroIntervention 2012;8:325-35

concienciación

mujer ≠ hombre



initial assessment - women vs men



Roffi M, et al. Eur Heart J doi:10.1093/eurheartj/ehv320

mortality causes

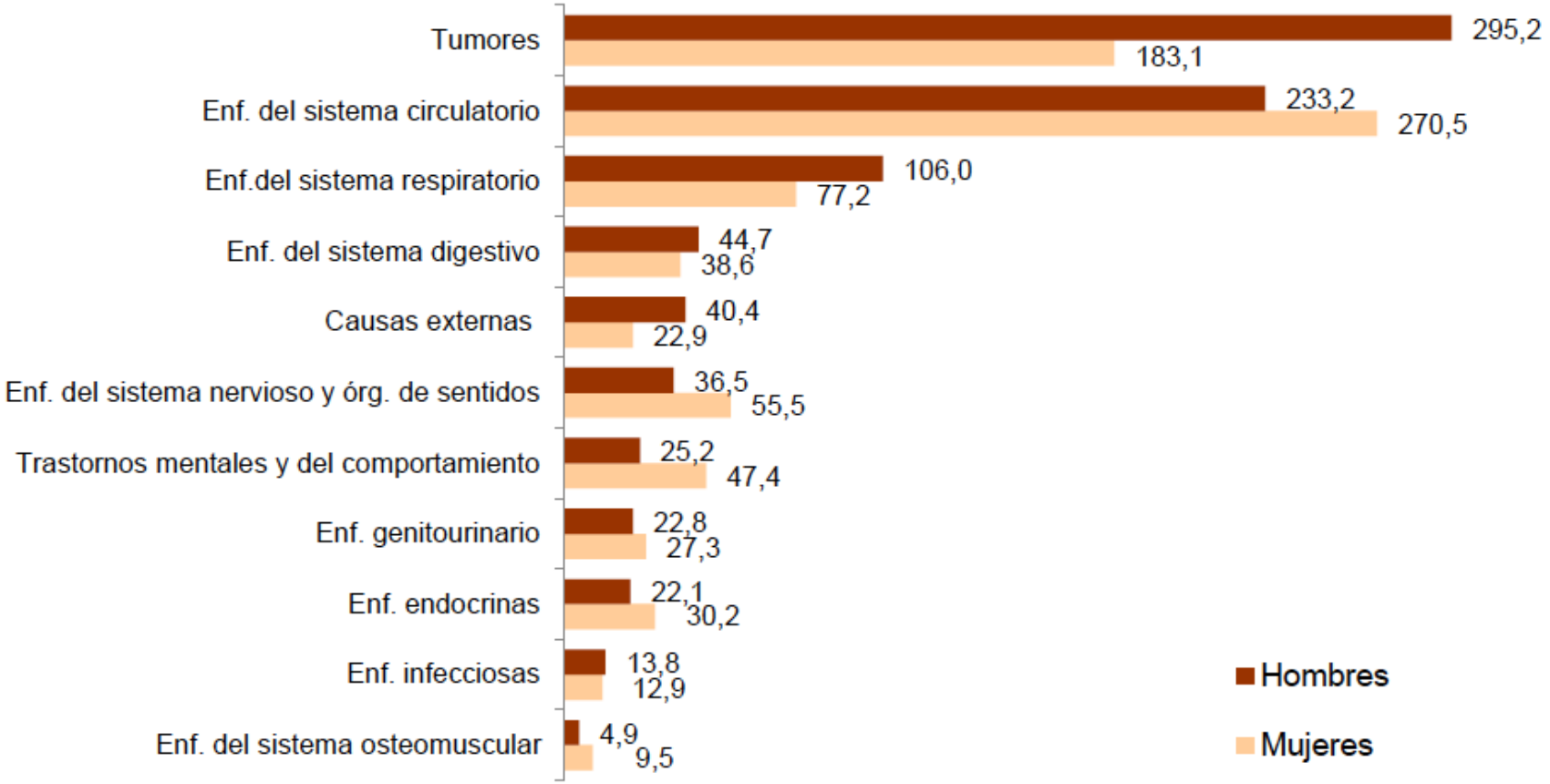
Instituto Nacional de Estadística

Distribución por capítulos de la Clasificación Internacional de Enfermedades. Año 2013

Capítulos de la CIE-10	Nº de defunciones	%
Total defunciones	390.419	100,0
Enfermedades del sistema circulatorio	117.484	30,1
Tumores	111.021	28,4
Enfermedades del sistema respiratorio	42.565	10,9
Enfermedades del sistema nervioso y de los órganos de los sentidos	21.486	5,5
Enfermedades del sistema digestivo	19.378	5,0
Trastornos mentales y del comportamiento	16.977	4,3
Causas externas de mortalidad	14.678	3,8
Enfermedades endocrinas, nutricionales y metabólicas	12.206	3,1
Enfermedades del sistema genitourinario	11.689	3,0
Síntomas, signos y hallazgos anormales clínicos y de laboratorio	8.947	2,3

Instituto Nacional de Estadística

Tasas brutas por 100.000 habitantes según causa de muerte por capítulos CIE-10 y sexo. Año 2013



Instituto Nacional de Estadística

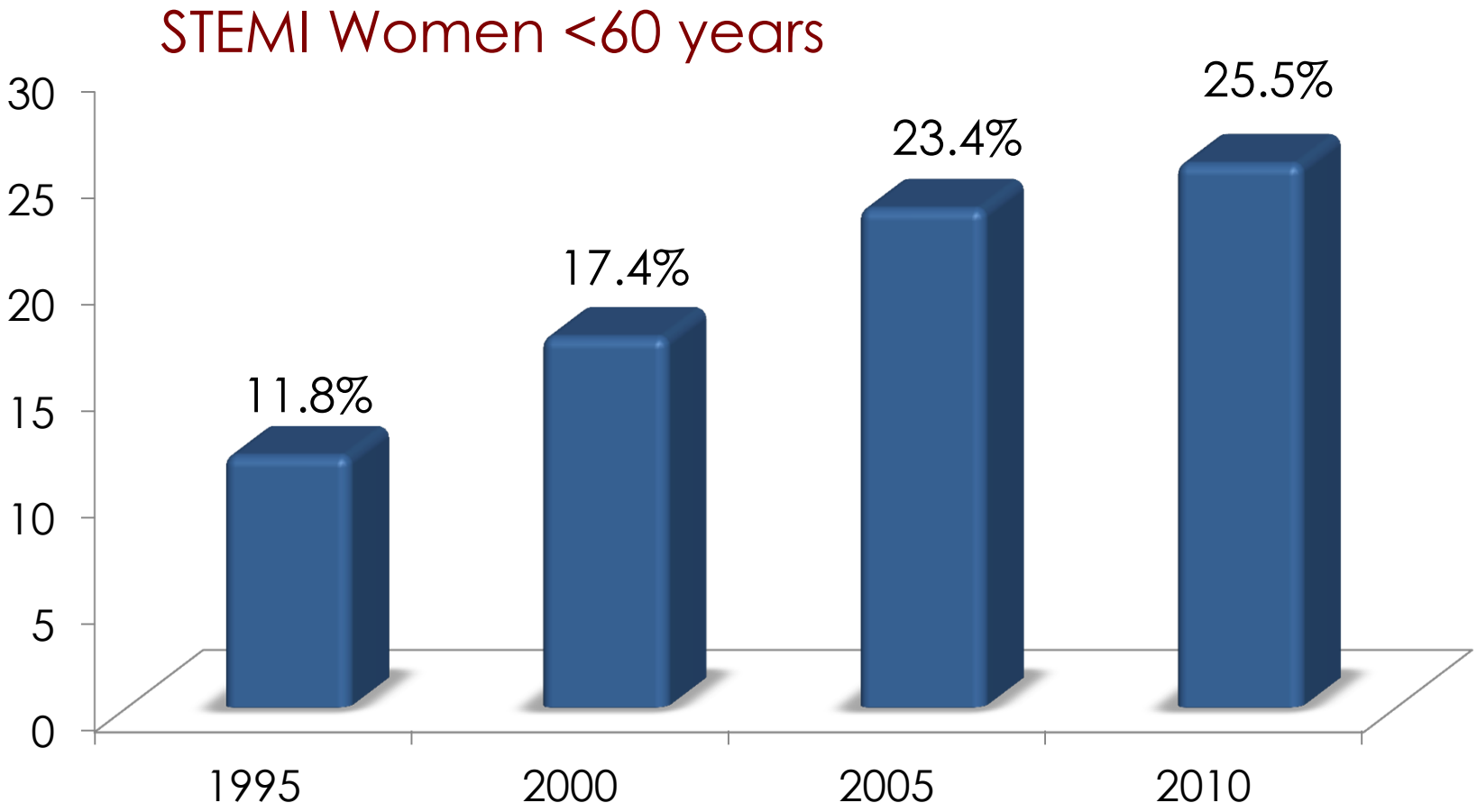
Año 2013	Total	Hombres	Mujeres
Total defunciones	**390.419**	**199.834**	**190.585**
Enfermedades isquémicas del corazón	33.413	19.402	14.011
Enfermedades cerebrovasculares	27.850	11.593	16.257
Cáncer de bronquios y pulmón	21.664	17.559	4.105
Insuficiencia cardiaca	16.888	6.136	10.752
Demencias	16.305	5.332	10.973
Enf. crónicas de las vías respiratorias inferiores (ECVRI)	15.387	11.377	4.010
Enfermedad de Alzheimer	12.775	3.843	8.932
Cáncer de colon	11.850	6.944	4.906
Enfermedad hipertensiva	11.243	3.648	7.595
Diabetes mellitus	9.391	3.985	5.406
Neumonía	8.333	4.317	4.016
Insuficiencia renal	6.836	3.188	3.648
Cáncer de mama	6.589	112	6.477
Cáncer de páncreas	6.039	3.169	2.870
Cáncer de próstata	5.787	5.787	-

Association of Changes in Clinical Characteristics and Management With Improvement in Survival Among Patients With ST-Elevation Myocardial Infarction

Clinical Characteristics	1995 (n = 1536)	2000 (n = 1844)	2005 (n = 1611)	2010 (n = 1716)	*P* for Trend	Percentage Change From 1995 to 2010, (95% CI)
Age, mean (SD), y	66.2 (14.0)	64.5 (14.6)	64.0 (14.7)	63.3 (14.5)	<.001	–2.9 (–1.9 to –3.9)
Men						
<60	421 (38.1)	622 (46.3)	585 (50.7)	634 (49.0)		10.9 (7.0 to 14.8)
60-74	457 (41.4)	455 (33.9)	353 (30.6)	420 (32.5)	<.001	–8.9 (–5.0 to –12.8)
≥75	227 (20.5)	267 (19.9)	215 (18.6)	239 (18.5)		–2.1 (1.1 to –5.3)
Women						
<60	51 (11.8)	87 (17.4)	107 (23.4)	108 (25.5)		13.7 (8.5 to 18.8)
60-74	148 (34.3)	166 (33.2)	121 (26.4)	117 (27.7)	<.001	–6.7 (–0.05 to –12.8)
≥75	232 (53.8)	247 (49.4)	230 (50.2)	198 (46.8)		–7.0 (–0.03 to –13.6)
Women, No. (%)	431 (28.1)	500 (27.1)	458 (28.4)	423 (24.7)	.06	–3.4 (–0.4 to –6.4)
BMI, mean (SD)	25.9 (3.9)	26.3 (4.1)	26.9 (4.6)	26.7 (4.4)	<.001	0.8 (0.5 to 1.1)
No. of patients	1454	1654	1440	1615		
Type of institution						
University hospital	380 (25)	518 (28)	609 (38)	634 (37)		12.2 (9.0 to 15.3)
Community/Army hospital	925 (60)	972 (53)	751 (47)	755 (44)	<.001	–16.2 (–12.8 to –19.6)
Private clinic	231 (15)	354 (19)	251 (16)	327 (19)		4.0 (1.4 to 6.6)
Number of patients per center, per mo, mean (SD)	5.1 (3.6)	5.8 (5.6)	7.6 (7.1)	8.7 (8.0)	<.001	3.6 (3.4 to 3.8)
Risk factors, No. (%)						
Hypertension	673 (43.8)	804 (43.6)	792 (49.2)	806 (47.0)	.006	3.1 (–0.03 to 6.6)
Hypercholesterolemia	534 (34.8)	719 (39.0)	699 (43.4)	675 (39.3)	.001	4.6 (1.2 to 7.9)
Diabetes mellitus	242 (15.8)	364 (19.7)	302 (18.7)	283 (16.5)	.92	0.7 (–1.8 to 3.3)
Current smoking	491 (32.0)	651 (35.3)	600 (37.2)	701 (40.9)	<.001	8.9 (5.6 to 12.2)
Obesity	208 (14.3)	269 (16.3)	299 (20.8)	324 (20.1)	<.001	5.8 (3.1 to 8.4)

Puymirat E, et al. JAMA. 2012;308:998-1006

Association of Changes in Clinical Characteristics and Management With Improvement in Survival Among Patients With ST-Elevation Myocardial Infarction

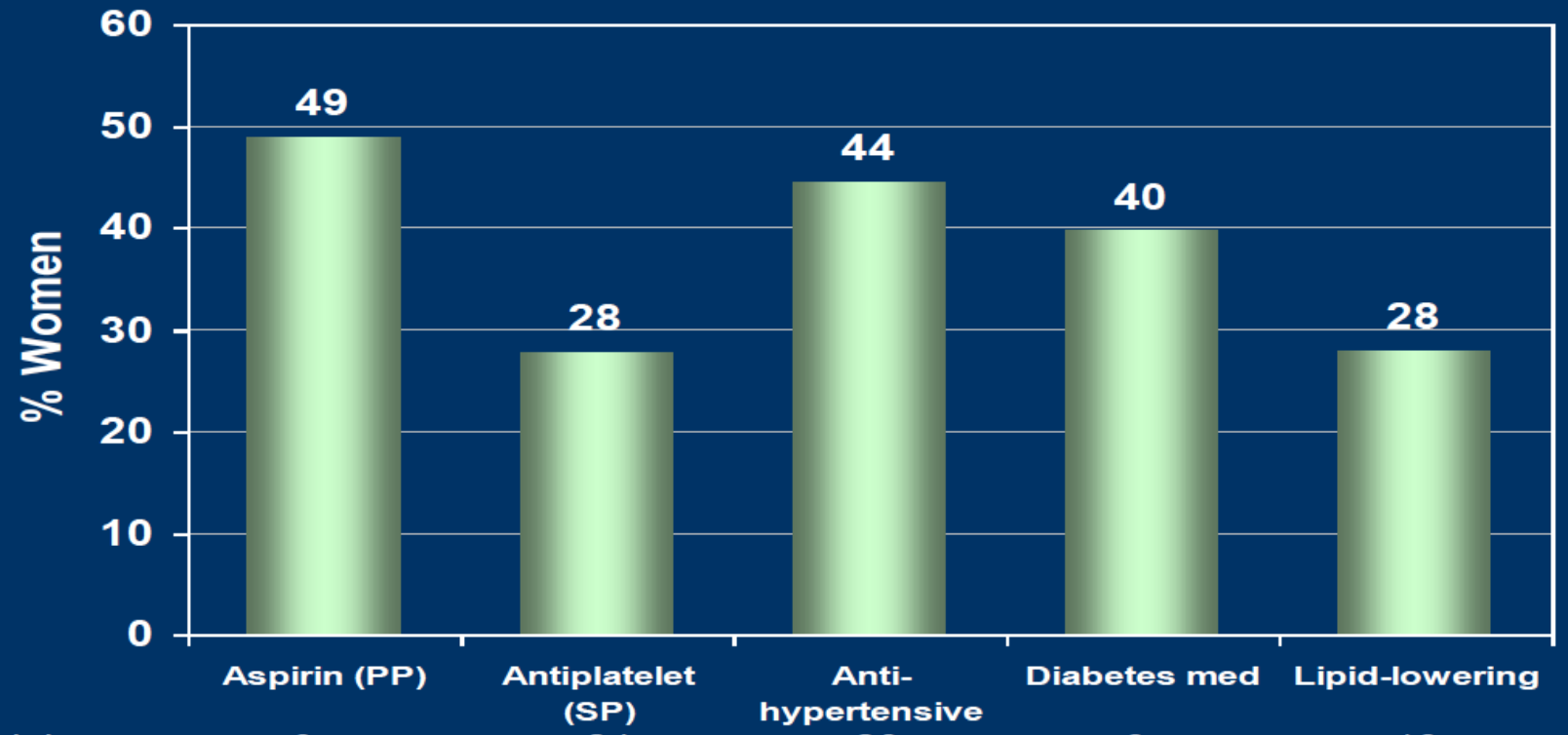


Puymirat E, et al. JAMA. 2012;308:998-1006



Evidence Base

Female Representation by Therapeutic Class



# trials	9	24	28	8	18

Duke Clinical Research Institute

Melloni. *Circ Cardiovasc Qual Outcomes* 2010; 3: 135

retraso atención

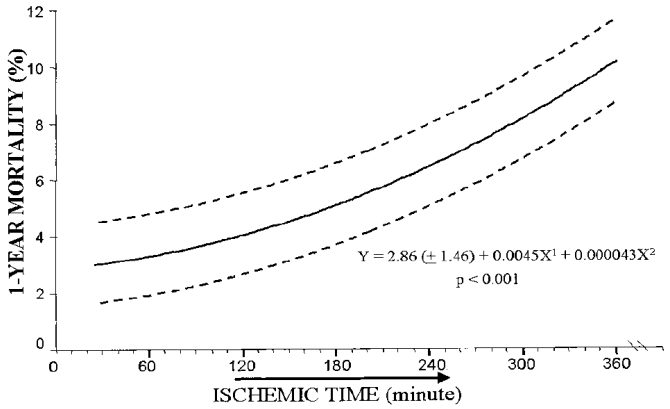
mujer ≠ hombre



Time Delay to Treatment and Mortality in Primary Angioplasty for Acute Myocardial Infarction

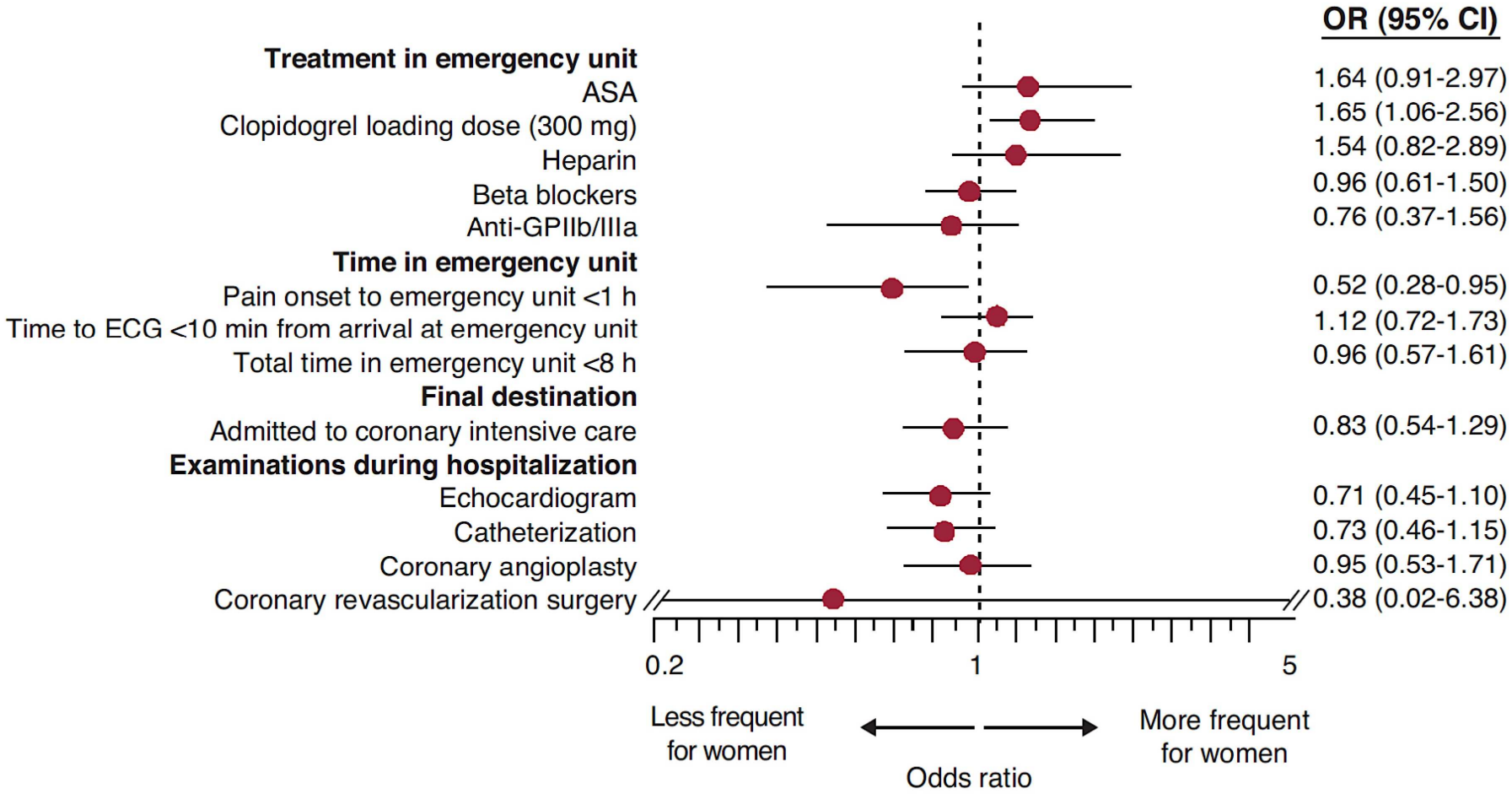
Patient Characteristics and Ischemic Time

Variable	Yes	No	*P*
Age >70 y	237±149	208±139	<0.0001
Female gender	233±137	208±139	0.004
Diabetes	248±195	211±135	0.002
Previous CABG/PCI	217±146	190±68	0.035
Previous infarction	202±76	216±148	NS
Hypertension	203±70	218±156	NS
Hypercholesterolemia	205±121	217±146	NS
Smoking	212±124	217±155	NS
Killip class >1	214±123	214±144	NS
Anterior infarction	215±148	213±135	NS
TIMI flow 0–1 preprocedure	214±128	215±174	NS
Multivessel disease	213±112	215±169	NS
Successful reperfusion*	208±120	229±188	0.006
Stent	211±119	217±161	NS
EF <30%†	237±138	214±140	0.04



De Luca G, et al. Circulation 2004;109:1223-25

Comparison of the Management of Non-ST Segment Elevation Myocardial Infarction During Emergency Care According to Sex of the Patient



Riesgo A, et al. Rev Esp Cardiol. 2011;64:1060-4

Sex Differences in Reperfusion in Young Patients With ST-Segment–Elevation Myocardial Infarction

Results From the VIRGO Study

Exceeds Recommended Timeframe Guidelines

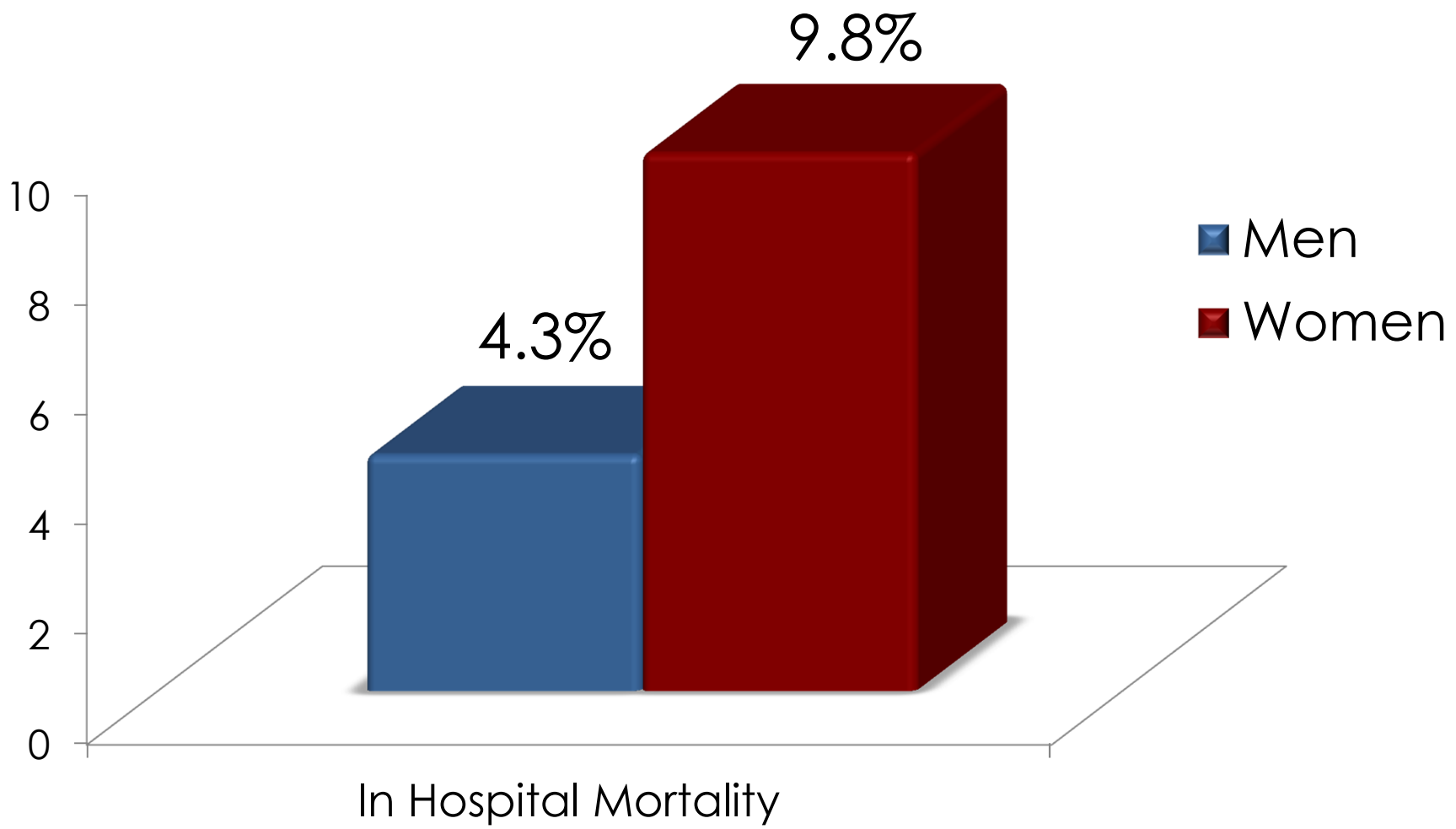
	Overall		Women		Men			
	N	n (%)	N	n (%)	N	n (%)	OR (95% CI)	*P* Value
Door-to-ECG								
>10 min	1137	297 (26)	686	191 (28)	451	106 (24)	1.25 (0.95–1.65)	0.10
PCI door-to-balloon	1038	375 (36)	634	257 (41)	404	118 (29)	1.65 (1.27–2.16)	<0.001
Nontransfer patients:								
>90 min to PCI	678	167 (25)	420	113 (27)	258	54 (21)	1.39 (0.96–2.01)	0.08
Transfer patients								
>120 min to PCI	360	208 (58)	214	144 (67)	146	64 (44)	2.63 (1.71–4.07)	<0.001
Door-to-needle								
>30 min	115	57 (50)	61	37 (61)	54	20 (37)	2.62 (1.23–5.57)	0.012

D´Onofrio G, et al. Circulation 2015;131:1324-32

pronóstico

mujer ≠ hombre

hospital mortality



Benamer H, et al. Eurointervention 2011;6:1073-9

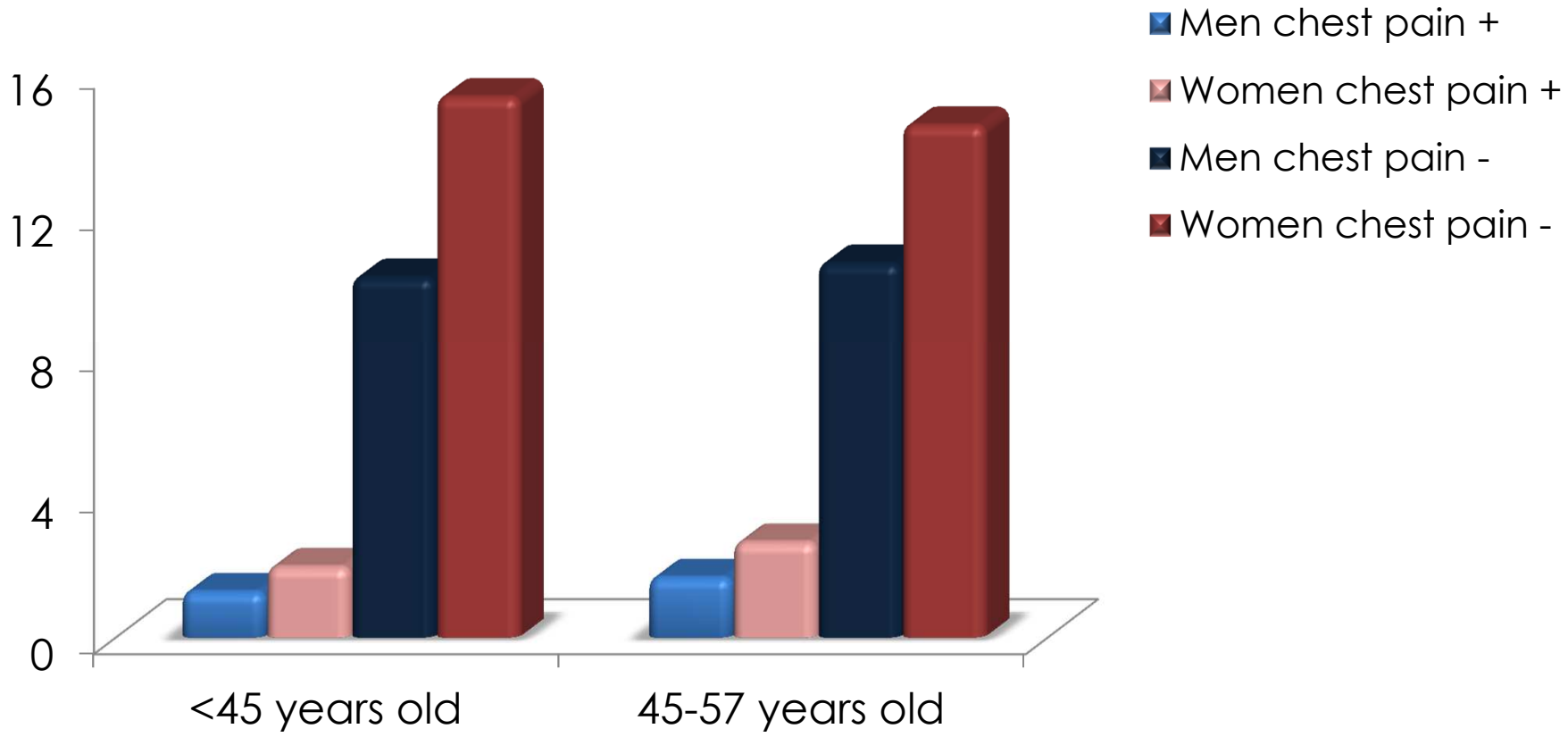
Association of Age and Sex With Myocardial Infarction Symptom Presentation and In-Hospital Mortality

Hospital Mortality for Myocardial Infarction Patients, by Chest Pain/Discomfort on Presentation, Age, and Sex: NRMI, 1994-2006

Age, y	Men With Chest Pain	Women With Chest Pain	Men Without Chest Pain	Women Without Chest Pain	*P* Value
			Crude rate, No. (%)		
<45 (n = 66 540)	562/44 651 (1.3)	246/12 413 (2.0)	679/6653 (10.2)	432/2823 (15.3)	<.001
45-54 (n = 132 777)	1476/85 029 (1.7)	679/25 006 (2.7)	1680/15 849 (10.6)	997/6893 (14.5)	
55-64 (n = 201 019)	3621/109 383 (3.3)	2066/43 510 (4.7)	4254/30 472 (14.0)	2974/17 654 (16.8)	
65-74 (n = 267 480)	7378/107 347 (6.9)	5746/66 942 (8.6)	9888/52 256 (18.9)	7891/40 935) (19.3)	
≥75 (n = 475 697)	15 330/112 267 (13.7)	19 962/131 554 (15.2)	23 148/98 025 (23.6)	29 141/133 851 (21.8)	
			Unadjusted OR (95% CI)		C Statistic
<45	1 [Reference]	1.59 (1.36-1.85)	8.92 (7.95-10.00)	14.17 (12.42-16.17)	.74
45-54	1 [Reference]	1.58 (1.44-1.73)	6.71 (6.24-7.21)	9.57 (8.80-10.42)	.72
55-64	1 [Reference]	1.46 (1.38-1.54)	4.74 (4.52-4.96)	5.92 (5.62-6.23)	.69
65-74	1 [Reference]	1.27 (1.23-1.32)	3.16 (3.06-3.27)	3.24 (3.13-3.35)	.64
≥75	1 [Reference]	1.13 (1.11-1.16)	1.95 (1.91-2.00)	1.76 (1.72-1.80)	.57
			Adjusted OR (95% CI)		

Canto JG, et al. JAMA. 2012;307:813-22

Association of Age and Sex With Myocardial Infarction Symptom Presentation and In-Hospital Mortality

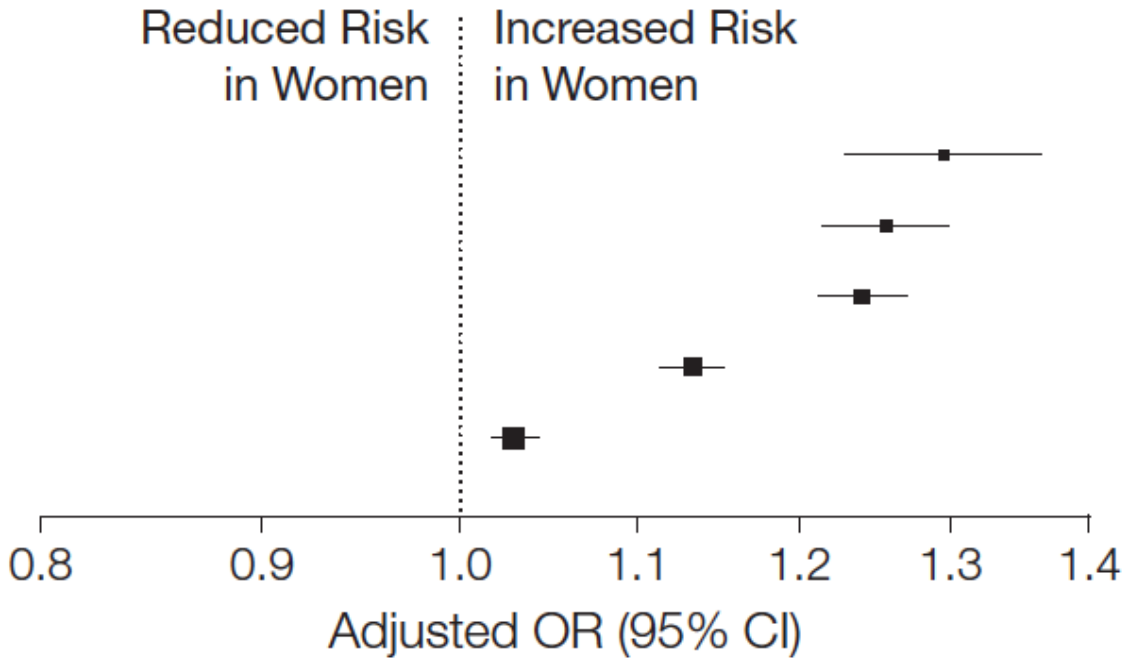


Canto JG, et al. JAMA. 2012;307:813-22

Association of Age and Sex With Myocardial Infarction Symptom Presentation and In-Hospital Mortality

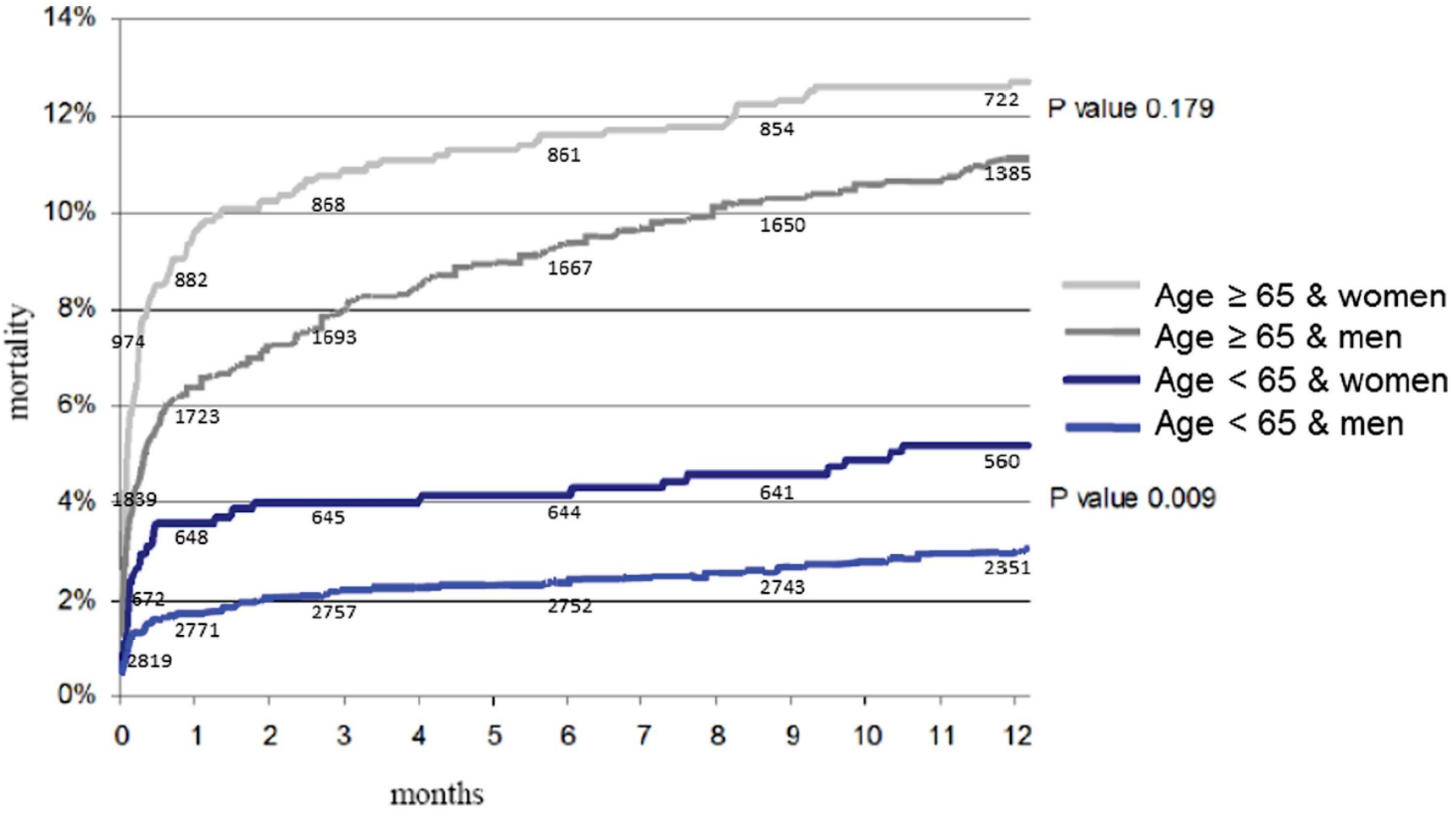
Sex Differences in Myocardial Infarction Presentation Without Chest Pain/Discomfort, Stratified by Age

Age, y	OR (95% CI)
<45	1.30 (1.23-1.36)
45-54	1.26 (1.22-1.30)
55-64	1.24 (1.21-1.27)
65-74	1.13 (1.11-1.15)
75-84	1.03 (1.02-1.04)



Canto JG, et al. JAMA. 2012;307:813-22

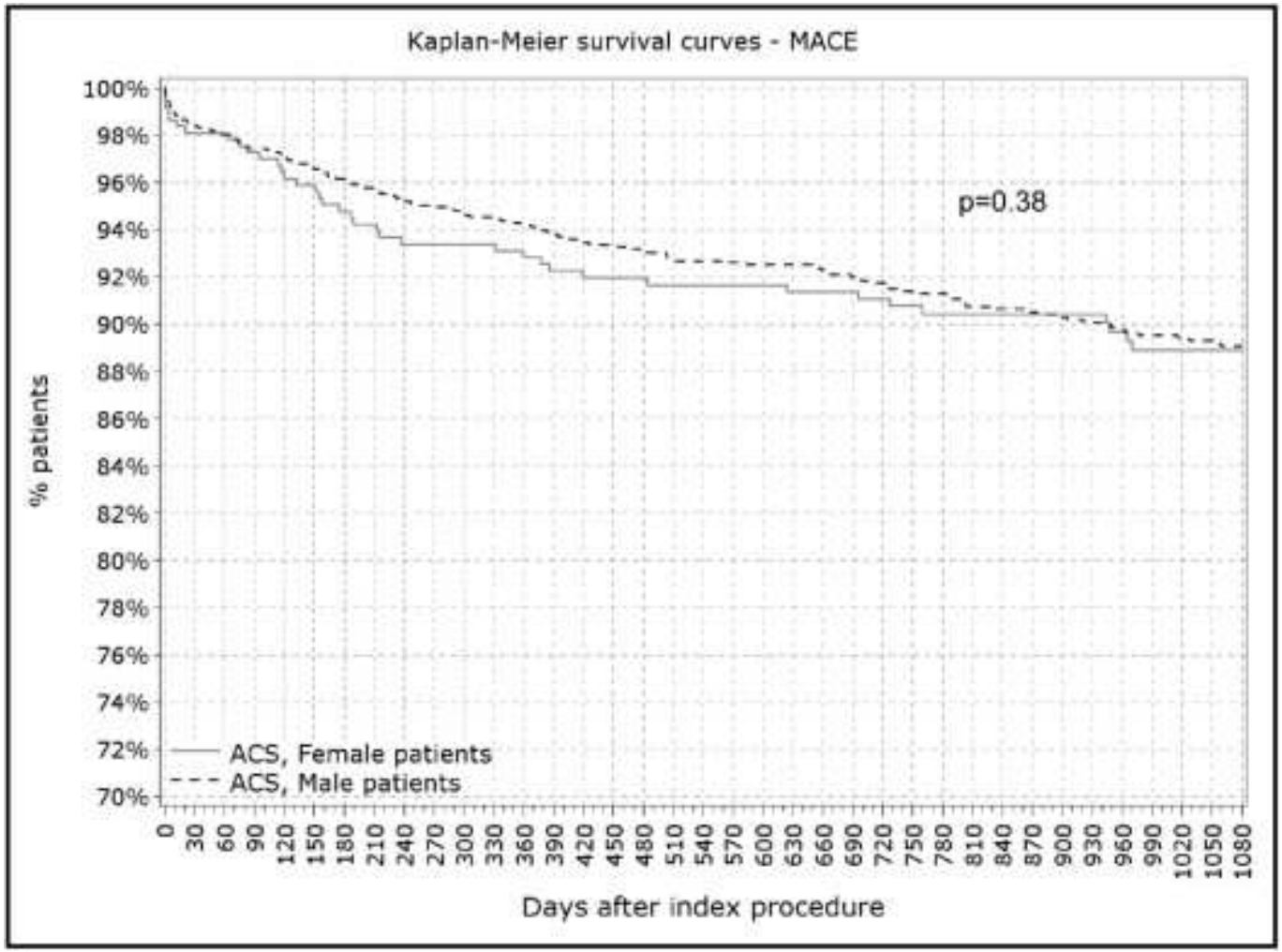
hospital mortality



Otten AM, et al. Eur Heart J Acute Cardiovasc Care. 2013;2:334-41

treatment

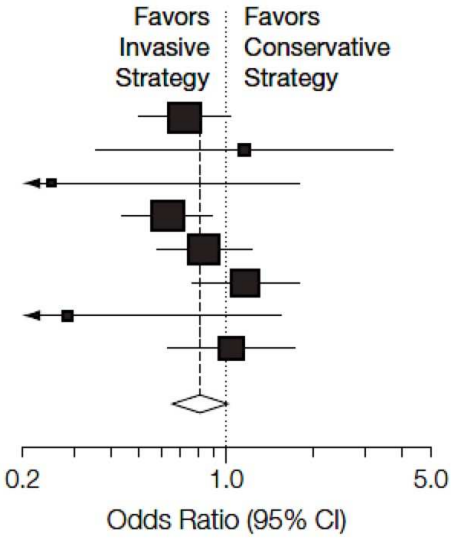
El tratamiento basado en la evidencia científica equivale a equidad de género



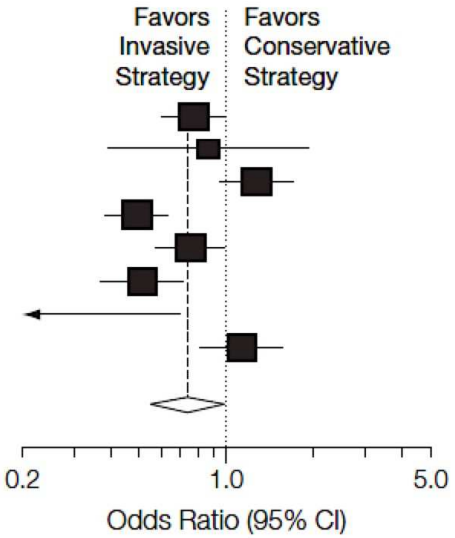
Fath-Ordoubadi, et al. Am J Cardiol. 2012;110:636-42

1 year death, MI, or Rehospitalization With ACS in Invasive vs Conservative Treatment Strategy in NSTE ACS

Women	Rates of Death, MI, or Rehospitalization With ACS, No./Total No. (%): Invasive Strategy	Rates of Death, MI, or Rehospitalization With ACS, No./Total No. (%): Conservative Strategy	Odds Ratio (95% CI)
TIMI IIIB[10]	85/249 (34.1)	104/248 (41.9)	0.72 (0.50-1.03)
MATE[11]	7/34 (20.6)	7/38 (18.4)	1.15 (0.36-3.69)
VANQWISH[18]	2/14 (14.3)	4/10 (40.0)	0.25 (0.04-1.77)
FRISC II[1]	65/315 (20.6)	105/357 (29.4)	0.62 (0.44-0.89)
TACTICS-TIMI 18[7]	67/395 (17.0)	71/362 (19.6)	0.84 (0.58-1.21)
RITA 3[2]	55/350 (15.7)	46/332 (13.9)	1.16 (0.76-1.77)
VINO[20]	2/23 (8.7)	7/28 (25.0)	0.29 (0.05-1.54)
ICTUS[8]	41/158 (25.9)	41/162 (25.3)	1.03 (0.63-1.71)
Overall	**324/1538 (21.1)**	**385/1537 (25.0)**	**0.81 (0.65-1.01)**

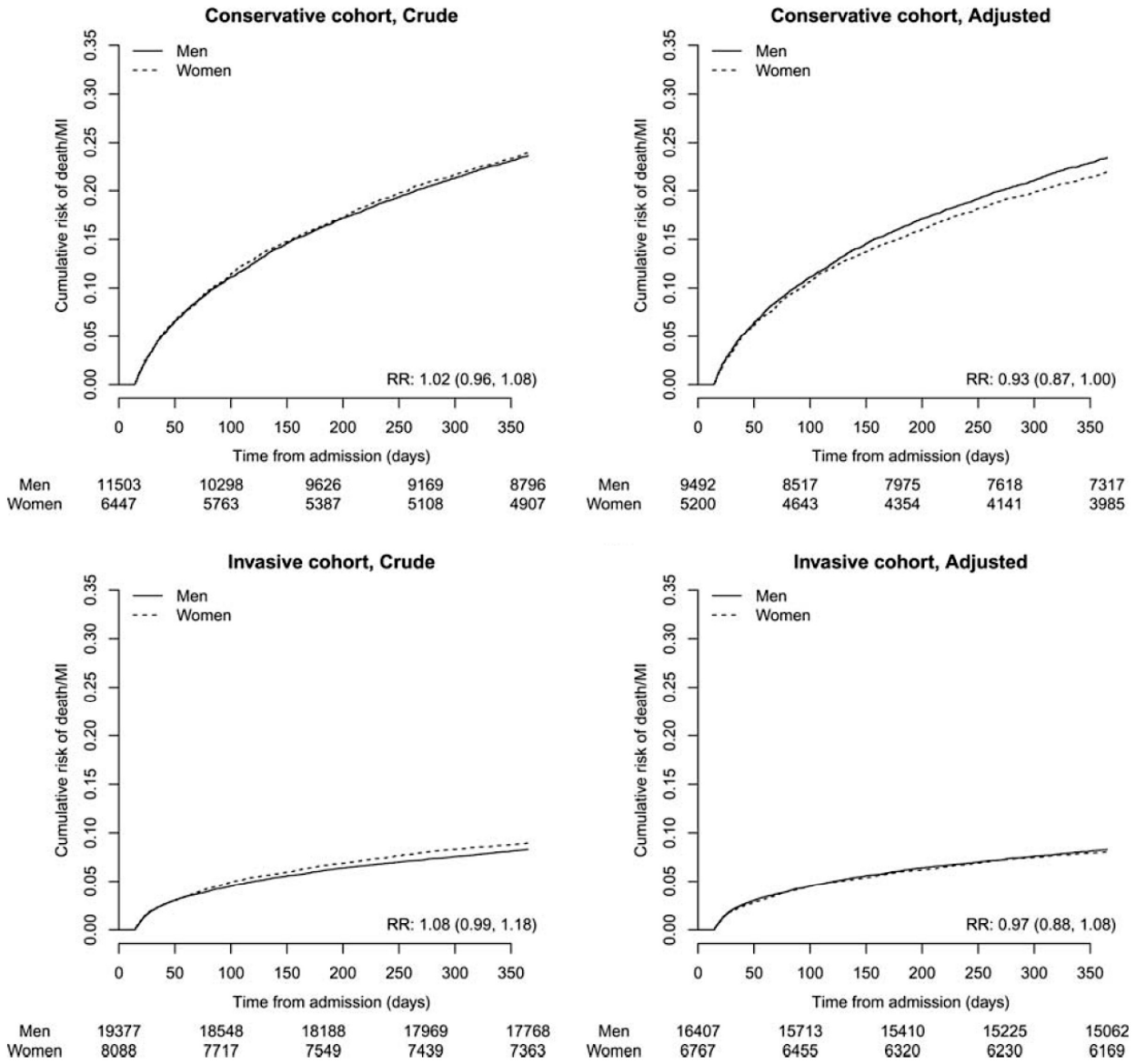


Men	Rates of Death, MI, or Rehospitalization With ACS, No./Total No. (%): Invasive Strategy	Rates of Death, MI, or Rehospitalization With ACS, No./Total No. (%): Conservative Strategy	Odds Ratio (95% CI)
TIMI IIIB[10]	178/491 (36.3)	206/485 (42.5)	0.77 (0.60-1.00)
MATE[11]	20/77 (26.0)	15/52 (28.8)	0.87 (0.39-1.90)
VANQWISH[18]	146/448 (32.6)	124/448 (27.7)	1.26 (0.95-1.68)
FRISC II[1]	131/778 (16.8)	217/745 (29.1)	0.49 (0.39-0.63)
TACTICS-TIMI 18[7]	110/719 (15.3)	144/744 (19.4)	0.75 (0.57-0.99)
RITA 3[2]	67/545 (12.3)	125/583 (21.4)	0.51 (0.37-0.71)
VINO[20]	3/41 (7.3)	12/39 (30.8)	0.18 (0.05-0.69)
ICTUS[8]	96/446 (21.5)	85/434 (19.6)	1.13 (0.81-1.56)
Overall	**751/3545 (21.2)**	**928/3530 (26.3)**	**0.73 (0.55-0.98)**



O'Donoghue M, et al. JAMA 2008;300:71-80

1 year death/MI in SWEETHEART NSTE MI patients



Alfredsson J, et al. Eur Heart J 2011;32:3128-36



ESC GUIDELINES

European Heart Journal
doi:10.1093/eurheartj/ehs215

ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

The Task Force on the management of ST
myocardial infarction of the European So

Authors/Task Force Members: Ph. Gabriel Steg
Stefan K. James (Chairperson) (Sweden)*, Dan
(Italy), Carina Blomstrom Lundqvist (Sweden
Carlo Di Mario (United Kingdom), Kenneth
(France), Francisco Fernandez-Aviles (Spain
Kingdom), Pantaleo Giannuzzi (Italy), Sig
(Austria), Peter Juni (Switzerland), Adna
(Finland), Mattie J. Lenzen (Netherlands
Marco Valgimigli (Italy), Arnoud van't
(Czech Republic), Doron Zahger (Isr

ESC Committee for Practice Guidelines (CPG):
(Germany), Claudio Ceconi (Italy), Veronica D
Christian Funck-Brentano (France), David Has
Germany UK), Juhani Knuuti (Finland), Phil
Bogdan A. Popescu (Romania), Željko Reiner
Michal Tendera (Poland), Adam Torbicki
Document Reviewers: David Hasdai (CP
(Sweden), Andrzej Budaj (Poland), Pet
(UK), Ahmet Fuat (UK), Olivija Gusbe
Patrizio Lancellotti (Belgium), Aldo
(Germany), Massimo F. Piepoli (Ita
Lars Wallentin (Sweden)

* Corresponding authors: Ph. Gabriel Steg (Cha
Fax: +33 1 40 25 58 65. Email: pgsteg1.rag@
† Other ESC entities having participated in th
Association, European Association of Echo
Heart Association of Percutaneous Card
Working Groups: Acute Cardiac Care,
Councils: Cardiovascular Imaging,
The content of these European Soc
ESC Guidelines may be translated
University Press, the publisher o
Stefan K. James (Chairperson),
75185 Uppsala, Sweden. Tel:
Disclaimer. The ESC Gui
professionals are encour
professionals to make
guardian or carer. It is
© The European So

European Heart Journal (2014) **35**, 2541–2619
doi:10.1093/eurheartj/ehu278

ESC/EACTS GUIDELINES

2014 ESC/EACTS Guidelines on myocardial revascularization

The Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS)

Developed with the special contribution of the European Association of Percutaneous Cardiovascular Interventions (EAPCI)

Authors/Task Force members: Stephan Windecker* (ESC Chairperson) (Switzerland), Philippe Kolh* (EACTS Chairperson) (Belgium), Fernando Alfonso (Spain), Jean-Philippe Collet (France), Jochen Cremer (Germany), Volkmar Falk (Switzerland), Gerasimos Filippatos (Greece), Christian Hamm (Germany), Stuart J. Head (Netherlands), Peter Jüni (Switzerland), A. Pieter Kappetein (Netherlands), Adnan Kastrati (Germany), Juhani Knuuti (Finland), Ulf Landmesser (Switzerland), Günther Laufer (Austria), Franz-Josef Neumann (Germany), Dimitrios J. Richter (Greece), Patrick Schauerte (Germany), Miguel Sousa Uva (Portugal), Giulio G. Stefanini (Switzerland), David Paul Taggart (UK), Lucia Torracca (Italy), Marco Valgimigli (Italy), William Wijns (Belgium), and Adam Witkowski (Poland).

* First and corresponding authors: Stephan Windecker, Cardiology, Bern University Hospital, Freiburgstrasse 4, CH-3010 Bern, Switzerland. Tel: +41 31 632 47 70; Fax: +41 31 632 42 99; Email: stephan.windecker@insel.ch

Philippe Kolh, Cardiovascular Surgery Department, University Hospital (CHU, ULg) of Liege, Sart Tilman B 35, 4000 Liege, Belgium. Tel: +32 4 366 7163; Fax: +32 4 366 7164; Email: philippe.kolh@chu.ulg.ac.be

National Cardiac Societies document reviewers: listed in Addenda

The content of these European Society of Cardiology (ESC) and European Association for Cardio-Thoracic Surgery (EACTS) Guidelines has been published for personal and educational use only. No commercial use is authorized. No part of the ESC Guidelines may be translated or reproduced in any form without written permission from the ESC. Permission can be obtained upon submission of a written request to Oxford University Press, the publisher of the European Heart Journal and the party authorized to handle such permissions on behalf of the ESC.

† **Other ESC entities having participated in the development of this document:**

Associations: Acute Cardiovascular Care Association (ACCA), European Association for Cardiovascular Prevention & Rehabilitation (EACPR), European Association of Cardiovascular Imaging (EACVI), European Heart Rhythm Association (EHRA), Heart Failure Association of the ESC (HFA).

Working groups: Working Group on Cardiac Cellular Electrophysiology, Working Group on Cardiovascular Magnetic Resonance, Working Group on Cardiovascular Pharmacology and Drug Therapy, Working Group on Cardiovascular Surgery, Working Group on Coronary Pathophysiology and Microcirculation, Working Group on Nuclear Cardiology and Cardiac Computed Tomography, Working Group on Peripheral Circulation, Working Group on Thrombosis, Working Group on Valvular Heart Disease.

Councils: Council for Cardiology Practice, Council on Cardiovascular Primary Care, Council on Cardiovascular Nursing and Allied Professions.

Disclaimer 2014: The ESC/EACTS Guidelines represent the views of the ESC and of the EACTS and were produced after careful consideration of the scientific and medical knowledge and the evidence available at the time of their dating.

The ESC and EACTS are not responsible in the event of any contradiction, discrepancy and/or ambiguity between the ESC/EACTS Guidelines and any other official recommendations or guidelines issued by the relevant public health authorities, in particular in relation to good use of healthcare or therapeutic strategies. Health professionals are encouraged to take the ESC/EACTS Guidelines fully into account when exercising their clinical judgment as well as in the determination and the implementation of preventive, diagnostic or therapeutic medical strategies; however, the ESC/EACTS Guidelines do not in any way whatsoever override the individual responsibility of health professionals to make appropriate and accurate decisions in consideration of each patient's health condition and, where appropriate and/or necessary, in consultation with that patient and the patient's care provider. Nor do the ESC/EACTS Guidelines exempt health professionals from giving full and careful consideration to the relevant official, updated recommendations or guidelines issued by the competent public health authorities, in order to manage each patient's case in light of the scientifically accepted data pursuant to their respective ethical and professional obligations. It is also the health professional's responsibility to verify the applicable rules and regulations relating to drugs and medical devices at the time of prescription.

© The European Society of Cardiology 2014. All rights reserved. For permissions please email: journals.permissions@oup.com.

European Heart Journal Advance Access published August 29, 2015

European Heart Journal
doi:10.1093/eurheartj/ehv320

ESC GUIDELINES

2015 ESC guidelines for the management of acute coronary syndromes in patients presenting wi hout persistent ST-segment elevatio

ement of Acute Coronary Syndromes
ut Persistent ST-Segment Elevation
ardiology (ESC)

ffi* (Chairperson) (Switzerland), Carlo Patrono
Collet† (France), Christian Mueller†
therlands), Felicita Andreotti (Italy),
Borger (Germany), Carlos Brotons (Spain),
tzerland), Gerd Hasenfuss (Germany),
Belgium), Ulf Landmesser (Germany),
(USA), Robert F. Storey (UK),

') (Germany), Oliver Gaemperli (CPG Review
ewrait (Norway), Lina Badimon (Spain),
ioneer Care) (Italy), Filip Casselman
ns (UK), Martin Halle (Germany),

3 14, Switzerland. Tel: +41 22 37 73 743; Fax: +41 22 37
06 30935253, Fax: +39 06 30860159, Email: carlo.

ean Association of Cardiovas-
ular Primary Care (CCPC),
ary Pathophysiology and Microcir-
e is authorized. No part of the
a written request to Oxford
the evidence available at
r other official recom-
tsoever override the individual
ate decisions in consider-
ealth professionals from giving
ines issued by the competent
ofessional's responsibility to
ed. It is also the

Downloaded from http://eurheartj.oxfordjournals.org/ by guest on August 29, 2015

European Heart Journal Advance Access published August 29, 2015

European Heart Journal
doi:10.1093/eurheartj/ehv320

ESC GUIDELINES

2015 ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

Task Force for the Management of Acute Coronary Syndromes in Patients Presenting without Persistent ST-Segment Elevation of the European Society of Cardiology (ESC)

Authors/Task Force Members: Marco Roffi* (Chairperson) (Switzerland), Carlo Patrono * (Co-Chairperson) (Italy), Jean-Philippe Collet† (France), Christian Mueller† (Switzerland), Marco Valgimigli† (The Netherlands), Felicita Andreotti (Italy), Jeroen J. Bax (The Netherlands), Michael A. Borger (Germany), Carlos Brotons (Spain), Derek P. Chew (Australia), Baris Gencer (Switzerland), Gerd Hasenfuss (Germany), Keld Kjeldsen (Denmark), Patrizio Lancellotti (Belgium), Ulf Landmesser (Germany), Julinda Mehilli (Germany), Debabrata Mukherjee (USA), Robert F. Storey (UK), and Stephan Windecker (Switzerland)

Document Reviewers: Helmut Baumgartner (CPG Review Coordinator) (Germany), Oliver Gaemperli (CPG Review Coordinator) (Switzerland), Stephan Achenbach (Germany), Stefan Agewall (Norway), Lina Badimon (Spain), Colin Baigent (UK), Héctor Bueno (Spain), Raffaele Bugiardini (Italy), Scipione Carerj (Italy), Filip Casselman (Belgium), Thomas Cuisset (France), Çetin Erol (Turkey), Donna Fitzsimons (UK), Martin Halle (Germany),

* Corresponding authors: Marco Roffi, Division of Cardiology, University Hospital, Rue Gabrielle Perret-Gentil 4, 1211 Geneva 14, Switzerland, Tel: +41 22 37 23 743, Fax: +41 22 37 27 229, E-mail: Marco.Roffi@hcuge.ch

Carlo Patrono, Istituto di Farmacologia, Università Cattolica del Sacro Cuore, Largo F. Vito 1, IT-00168 Rome, Italy, Tel: +39 06 30154253, Fax: +39 06 3050159, E-mail: carlo.patrono@rm.unicatt.it

† Section Coordinators affiliations listed in the Appendix.

ESC Committee for Practice Guidelines (CPG) and National Cardiac Societies document reviewers listed in the Appendix.

ESC entities having participated in the development of this document:

Associations: Acute Cardiovascular Care Association (ACCA), European Association for Cardiovascular Prevention & Rehabilitation (EACPR), European Association of Cardiovascular Imaging (EACVI), European Association of Percutaneous Cardiovascular Interventions (EAPCI), Heart Failure Association (HFA).

Councils: Council on Cardiovascular Nursing and Allied Professions (CCNAP), Council for Cardiology Practice (CCP), Council on Cardiovascular Primary Care (CCPC).

Working Groups: Working Group on Cardiovascular Pharmacotherapy, Working Group on Cardiovascular Surgery, Working Group on Coronary Pathophysiology and Microcirculation, Working Group on Thrombosis.

The content of these European Society of Cardiology (ESC) Guidelines has been published for personal and educational use only. No commercial use is authorized. No part of the ESC Guidelines may be translated or reproduced in any form without written permission from the ESC. Permission can be obtained upon submission of a written request to Oxford University Press, the publisher of the European Heart Journal and the party authorized to handle such permissions on behalf of the ESC.

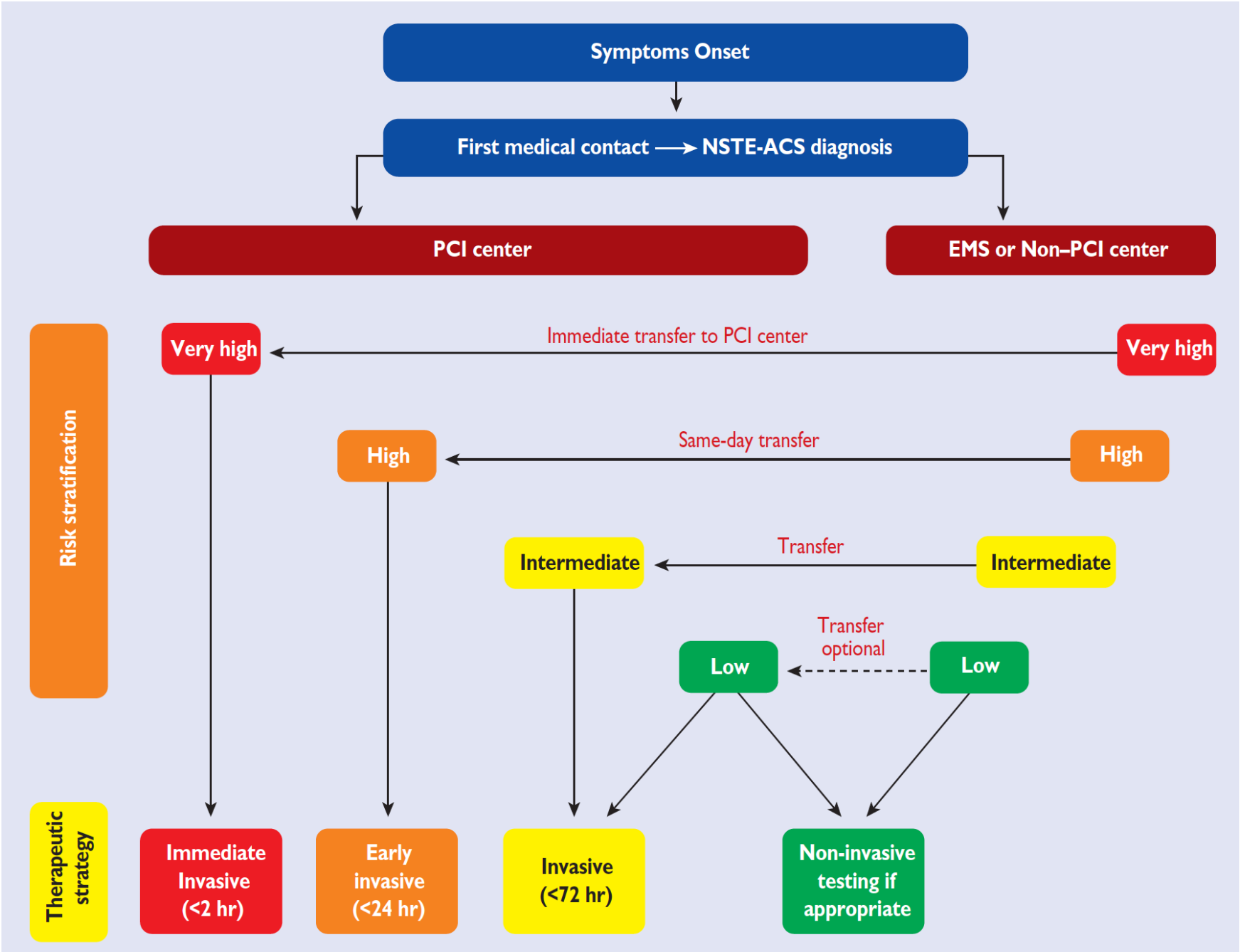
Disclaimer: The ESC Guidelines represent the views of the ESC and were produced after careful consideration of the scientific and medical knowledge and the evidence available at the time of their publication. The ESC is not responsible in the event of any contradiction, discrepancy and/or ambiguity between the ESC Guidelines and any other official recommendations or guidelines issued by the relevant public health authorities, in particular in relation to good use of healthcare or therapeutic strategies. Health professionals are encouraged to take the ESC Guidelines fully into account when exercising their clinical judgment, as well as in the determination and the implementation of preventive, diagnostic or therapeutic medical strategies; however, the ESC Guidelines do not override, in any way whatsoever, the individual responsibility of health professionals to make appropriate and accurate decisions in consideration of each patient's health condition and in consultation with that patient and, where appropriate and/or necessary, the patient's caregiver. Nor do the ESC Guidelines exempt health professionals from taking into full and careful consideration the relevant official updated recommendations or guidelines issued by the competent public health authorities, in order to manage each patient's case in light of the scientifically accepted data pursuant to their respective ethical and professional obligations. It is also the health professional's responsibility to verify the applicable rules and regulations relating to drugs and medical devices at the time of prescription.

© The European Society of Cardiology 2015. All rights reserved. For permissions please email: journals.permissions@oup.com.

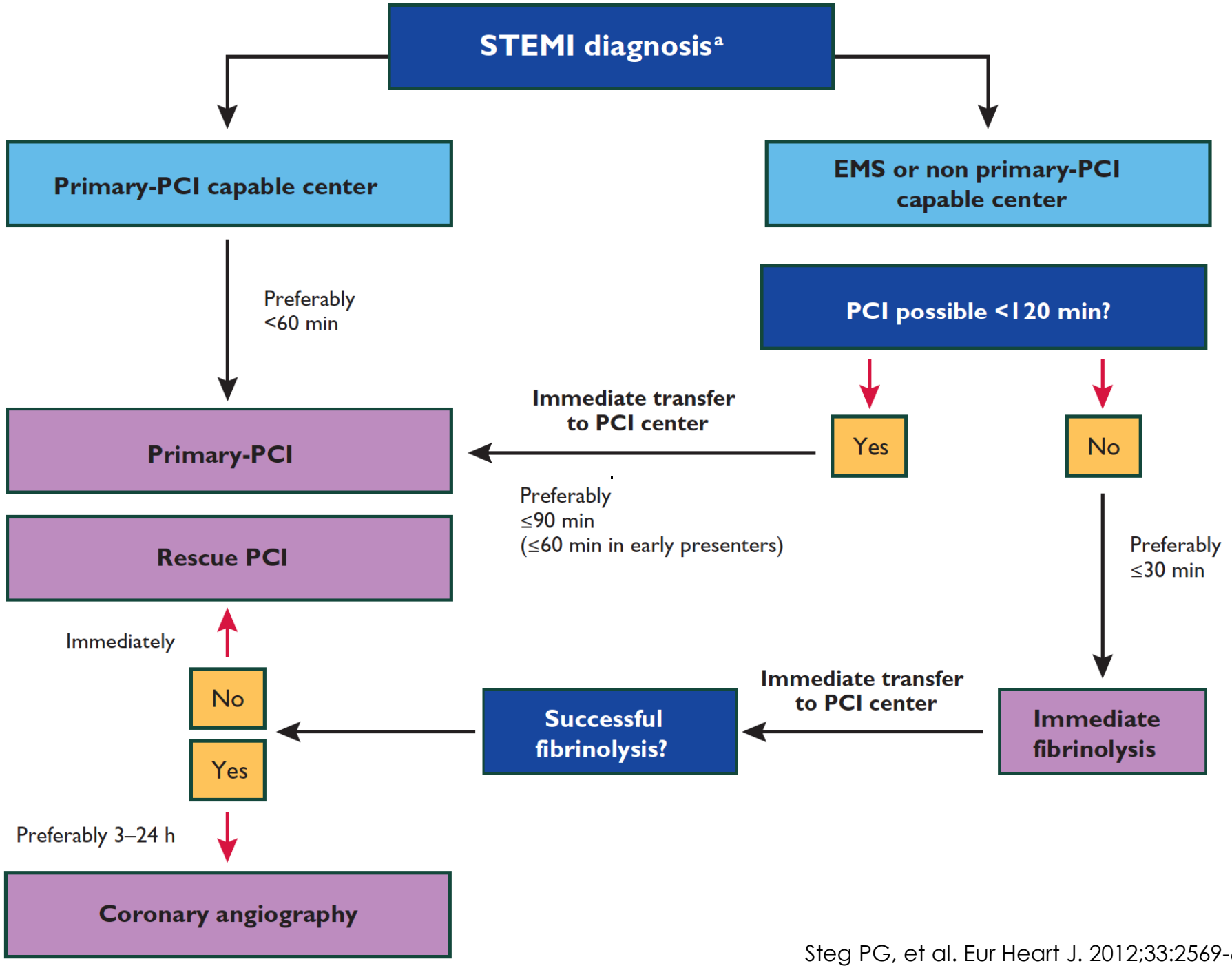
Downloaded from http://eurheartj.oxfordjournals.org/ by guest on August 29, 2015

Women with suspected NSTEMI should be treated just as men

Roffi M, et al. Eur Heart J doi:10.1093/eurheartj/ehv320



Roffi M, et al. Eur Heart J doi:10.1093/eurheartj/ehv320



Steg PG, et al. Eur Heart J. 2012;33:2569-619

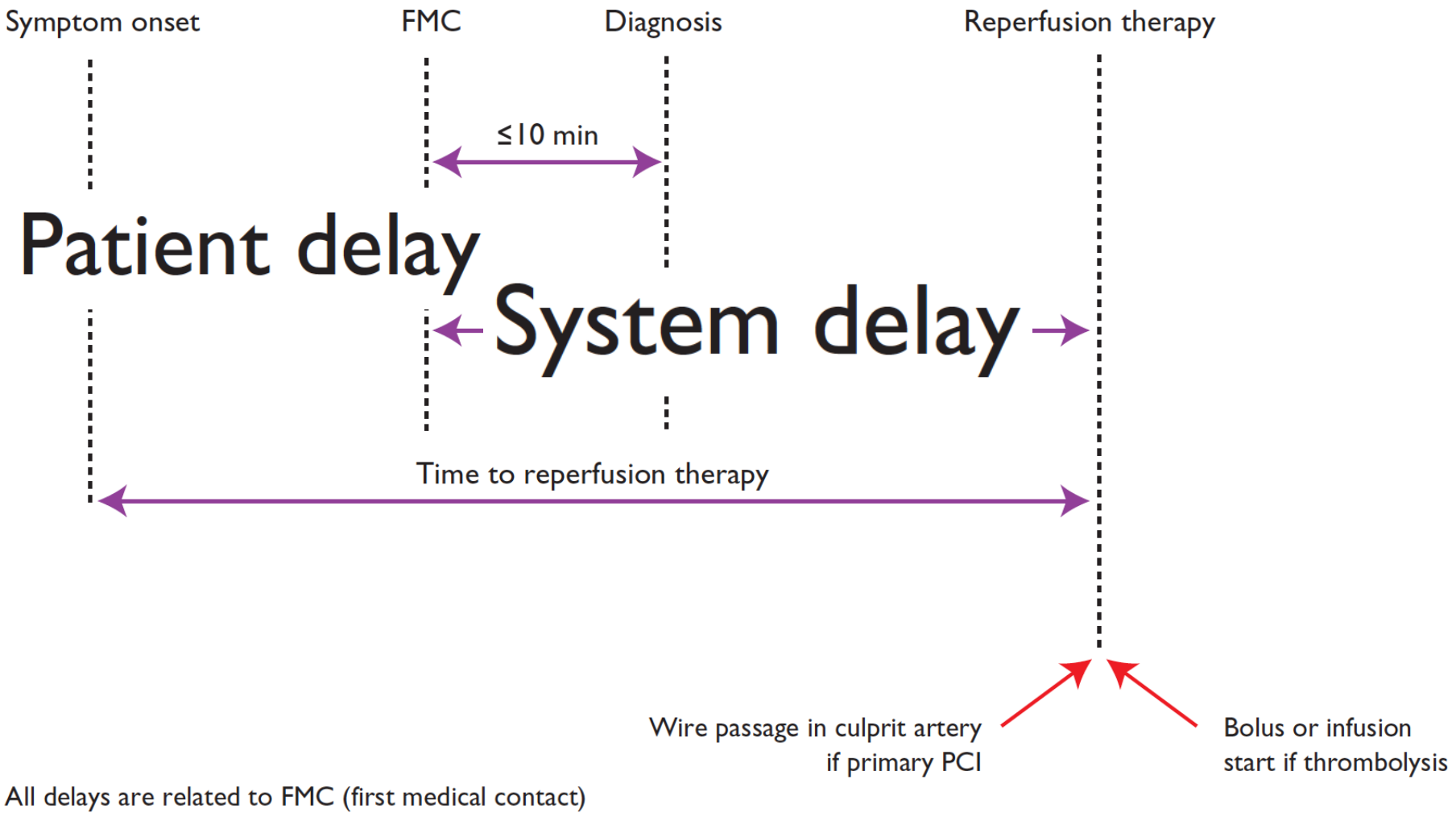
SPECIAL SUBSETS

Recommendations	Class [a]	Level [b]	Ref [c]
Both genders must be managed in a similar fashion.	I	C	-
A high index of suspicion for myocardial infarction must be maintained in women, diabetics, and elderly patients with atypical symptoms.	I	B	189
Special attention must be given to proper dosing of antithrombotics in elderly and renal failure patients.	I	B	190

Steg PG, et al. Eur Heart J. 2012;33:2569-619

Components of delay in STEMI

and ideal time intervals for intervention



Steg PG, et al. Eur Heart J. 2012;33:2569-619


WOMEN
The EAPCI Women Initiative

@domingomarzal
domingo.marzal@secardiologia.es

gracias por vuestra atención

SOCIEDAD ESPAÑOLA DE CARDIOLOGÍA

Servicio de Cardiología | SES Complejo Hospitalario de Mérida